STIC Search Report
EIC 1700

USPTO

STIC Database Tracking Number: 140128

TO: Sin J Lee
Location: REM 9D60
Art Unit : 1752
December 23, 2004

Case Serial Number: 10/690835

From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

I was able to do this search together for claim 24 together with claim 25.

sira
Search and Information Resources Administration

STIC Search Report
EIC 1700

STIC Database Tracking Number: 140126

TO: Sin J Lee
Location: REM 9D60
Art Unit : 1752
December 23, 2004

Case Serial Number: 10/690835

From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

STIC Search Results Feedback Form

EIC1700

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

1.1 Priority #1

Access DB# 146128

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J Lee Examiner #: 76060 Date: 11-30-04
Art Unit: 1752 Phone Number 30 2-1333 Serial Number: 10/640,835
Mail Box and Bldg/Room Location: 9D64 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Please See B.D.

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please Search for the
Polymer Combination
of Claim # 21.

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: K. Fuller	NA Sequence (#)	STN ✓
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#) 1	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 12/23/04	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 20	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 20	Other	Other (specify)

PTO-1590 (8-01)

Priority #1

Access DB# 141026

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 7660 Date: 11-30-04
Art Unit: 1752 Phone Number 30 2-1333 Serial Number: 10/640,835
Mail Box and Bldg/Room Location: 9D64 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Please see Bib.

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for the invention of Claim # 25.

DEC 1 .. 2004

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: K. Fuller	NA Sequence (#)	STN ✓
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#) 1	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 12/23/04	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 20	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 20	Other	Other (specify)

PTO-1590 (8-01)

```
=> file reg
FILE 'REGISTRY' ENTERED AT 15:20:46 ON 23 DEC 2004
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provided by InfoChem.

STRUCTURE FILE UPDATES:   22 DEC 2004  HIGHEST RN 802006-11-7
DICTIONARY FILE UPDATES:  22 DEC 2004  HIGHEST RN 802006-11-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> file hcaplu
FILE 'HCAPLUS' ENTERED AT 15:20:50 ON 23 DEC 2004
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FILE COVERS 1907 - 23 Dec 2004  VOL 141 ISS 26
FILE LAST UPDATED: 22 Dec 2004  (20041222/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
```

Search covers claims 21 and Claim 25

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=> d que
L3       311581 SEA FILE=REGISTRY ABB=ON  SULFONAMID?
L5        72304 SEA FILE=REGISTRY ABB=ON  PMS/CI AND 1-40/SI
L7          100 SEA FILE=REGISTRY ABB=ON  L5 AND L3
L8       311581 SEA FILE=REGISTRY ABB=ON  L3 OR L3
L9       160000 SEA FILE=REGISTRY RAN=(210827-34-2,) ABB=ON  L3 OR L3
L10      151581 SEA FILE=REGISTRY ABB=ON  L8 NOT L9
L11       64813 SEA FILE=HCAPLUS ABB=ON  L5
L12          55 SEA FILE=HCAPLUS ABB=ON  L7
L13       11148 SEA FILE=HCAPLUS ABB=ON  L9
L14      113264 SEA FILE=HCAPLUS ABB=ON  L10
```

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

```
L15        4073 SEA FILE=HCAPLUS ABB=ON  (L13 OR L14)(L)?RESIST?
L16         528 SEA FILE=HCAPLUS ABB=ON  L15 AND COMPOSITION?
L17         186 SEA FILE=HCAPLUS ABB=ON  L16 AND PHOTOG?/SC
L18         160 SEA FILE=HCAPLUS ABB=ON  L17 AND PHOTO?
L19          13 SEA FILE=HCAPLUS ABB=ON  L11 AND L18
L20          51 SEA FILE=HCAPLUS ABB=ON  L15 AND L11
L23          27 SEA FILE=HCAPLUS ABB=ON  L20 AND PHOTOG?/SC
L25          25 SEA FILE=HCAPLUS ABB=ON  L23 AND PHOTO?
L26          16 SEA FILE=HCAPLUS ABB=ON  L25 AND (COMPOSITION? OR COMPNS)
L28          16 SEA FILE=HCAPLUS ABB=ON  L19 OR L26
L29          12 SEA FILE=HCAPLUS ABB=ON  L12(L)?RESIST?
L31           6 SEA FILE=HCAPLUS ABB=ON  L29 AND PHOTOG?/SC
L32          17 SEA FILE=HCAPLUS ABB=ON  L28 OR L31
L34         573 SEA FILE=HCAPLUS ABB=ON  L15 AND (COMPOSITION? OR COMPNS)
L35         196 SEA FILE=HCAPLUS ABB=ON  L34 AND PHOTOG?/SC
L36          28 SEA FILE=HCAPLUS ABB=ON  L35 AND (?SILOXAN? OR ?SILSESQ? OR
                ?SILICON?)
L37        1078 SEA FILE=HCAPLUS ABB=ON  (L13 OR L14)(L)?IMAG?
L38          31 SEA FILE=HCAPLUS ABB=ON  L37 AND (?SILOXAN? OR ?SILSESQ? OR
                ?SILICON?)
L39          17 SEA FILE=HCAPLUS ABB=ON  L38 AND (COMPOSITION? OR COMPNS)
L40          15 SEA FILE=HCAPLUS ABB=ON  L39 AND PHOTOG?/SC
L41          41 SEA FILE=HCAPLUS ABB=ON  L36 OR L40
L42          35 SEA FILE=HCAPLUS ABB=ON  L41 AND PHOTO?
L43          42 SEA FILE=HCAPLUS ABB=ON  L32 OR L42
L44           1 SEA FILE=HCAPLUS ABB=ON  L12(L)?IMAG?
L45          43 SEA FILE=HCAPLUS ABB=ON  L43 OR L44
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=> d l45 bib abs hitind hitstr 1-43

L45 ANSWER 1 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:999586 HCAPLUS
DN 141:429661
TI **Photoresists** comprising fluorinated **silsesquioxanes**
IN Kanagasabapathy, Subbareddy; Barclay, George G.
PA USA
SO U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004229159	A1	20041118	US 2004-785424	20040223
PRAI	US 2003-449735P	P	20030223		

AB **Photoresist compns.** are provided that comprises one or more **photoacid** generator compds. and a **silsesquioxane** resin. Preferred **photoresists** of the invention can exhibit reduced outgassing when exposed to laser radiation, including ArF exposures.
IC ICM G03C001-76
NCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST fluorinated polymer **silsesquioxane** pos **photoresist** chem amplified
IT Positive **photoresists**

(fluorinated si-polymers and **photoresists** comprising same)

IT **Silsesquioxanes**
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing; fluorinated si-polymers and **photoresists** comprising same)

IT Fluoropolymers, properties
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**silsesquioxane**-; fluorinated si-polymers and **photoresists** comprising same)

IT **753003-44-0P 753003-46-2P 753003-49-5P**
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresists** comprising fluorinated **silsesquioxane**)

IT **795306-21-7**
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(**photoresists** comprising fluorinated **silsesquioxane**)

IT 685901-31-9P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of fluorinated **silsesquioxane**)

IT 95-10-3, Bicyclo[2.2.1]hept-5-ene-2-methanamine 421-83-0 423166-18-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of fluorinated **silsesquioxane**)

IT 287923-92-6P 685901-34-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of fluorinated **silsesquioxane**)

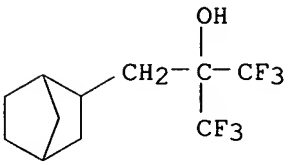
IT **753003-44-0P 753003-46-2P 753003-49-5P**
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresists** comprising fluorinated **silsesquioxane**)

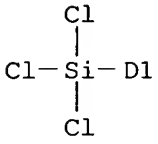
RN 753003-44-0 HCAPLUS

CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(trichlorosilyl)-, 1,1-dimethylethyl ester, polymer with 5(or 6)-(trichlorosilyl)-α,α-bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol, hydrolytic (9CI) (CA INDEX NAME)

CM 1

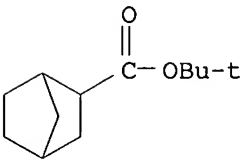
CRN 461053-88-3
CMF C11 H13 Cl3 F6 O Si
CCI IDS

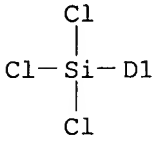




CM 2

CRN 365546-65-2
CMF C12 H19 Cl3 O2 Si
CCI IDS





CM 3

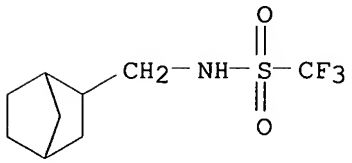
CRN 7732-18-5
CMF H2 O

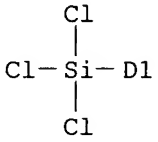
H_2O

RN 753003-46-2 HCAPLUS
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(trichlorosilyl)-, 1,1-dimethylethyl ester, polymer with 1,1,1-trifluoro-N-[[5(or 6)-(trichlorosilyl)bicyclo[2.2.1]hept-2-yl]methyl]methanesulfonamide, hydrolytic (9CI) (CA INDEX NAME)

CM 1

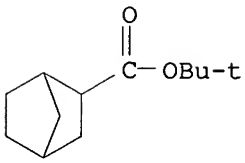
CRN 799763-30-7
CMF C9 H13 Cl3 F3 N O2 S Si
CCI IDS

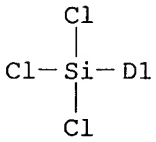




CM 2

CRN 365546-65-2
CMF C12 H19 Cl3 O2 Si
CCI IDS





CM 3

CRN 7732-18-5
CMF H2 O

H_2O

RN 753003-49-5 HCAPLUS
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(trichlorosilyl)-, 2-(acetyloxy)ethyl ester, polymer with 5(or 6)-(trichlorosilyl)-α,α-bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol,

hydrolytic (9CI) (CA INDEX NAME)

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CRN 799763-31-8
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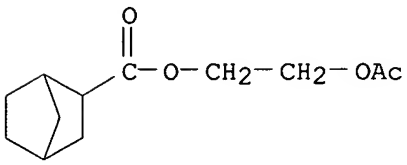
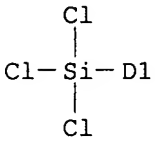
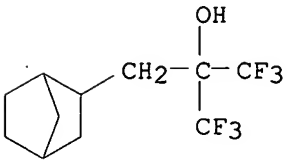
CCI IDS

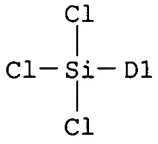




CM 2

CRN 461053-88-3
CMF C11 H13 Cl3 F6 O Si
CCI IDS





CM 3

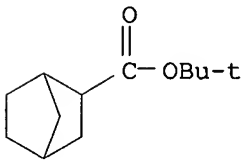
CRN 7732-18-5
CMF H2 O

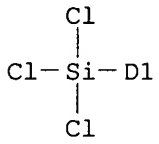
H_2O

IT **795306-21-7**
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(**photoresists** comprising fluorinated **silsesquioxane**
)
RN 795306-21-7 HCAPLUS
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(trichlorosilyl)-, 1,1-dimethylethyl ester, polymer with trichloromethylsilane, hydrolytic (9CI) (CA INDEX NAME)

CM 1

CRN 365546-65-2
CMF C12 H19 Cl3 O2 Si
CCI IDS





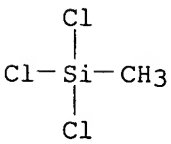
CM 2

CRN 7732-18-5
CMF H2 O

H_2O

CM 3

CRN 75-79-6
CMF C H3 Cl3 Si

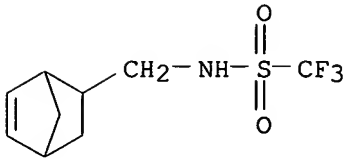


L45 ANSWER 2 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:732316 HCAPLUS
DN 141:251436
TI **Silicon**-containing fluorinated polymers and **photoresists** comprising same
IN Barclay, George G.; Kanagasabapathy, Subbareddy; Pohlers, Gerhard
PA Rohm and Haas Electronic Materials, L.L.C., USA
SO Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1455229	A1	20040908	EP 2004-250947	20040223
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK, HR				
	JP 2004252467	A2	20040909	JP 2004-46813	20040223
	US 2004224255	A1	20041111	US 2004-786477	20040223
PRAI	US 2003-449787P	P	20030223		

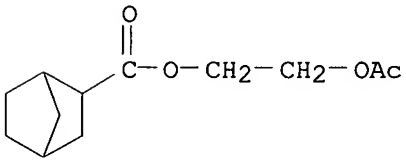
AB **Photoimageable compns.** are provided that contain Si-polymers that have a specified ratio of fluorine atoms to Si atoms. Preferred **photoresists** of the invention can exhibit enhanced resistance to plasma etchants.
IC ICM G03F007-075
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38
ST **silicon** fluorinated polymer **photoresist**
IT Etching
(plasma; **silicon**-containing fluorinated polymers for **photoresists**)
IT **Photoresists**
(**silicon**-containing fluorinated polymers for **photoresists**)
IT 95-10-3, Bicyclo[2.2.1]hept-5-ene-2-methanamine 421-83-0, Trifluoromethanesulfonylchloride 10025-78-2, Trichlorosilane 196314-61-1 423166-18-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of **silicon**-containing fluorinated polymers for **photoresists**)
IT **287923-92-6P** 685901-31-9P 685901-34-2P **753003-49-5DP**, hydrolized
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of **silicon**-containing fluorinated polymers for **photoresists**)
IT **753003-44-0P 753003-46-2P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of **silicon**-containing fluorinated polymers for **photoresists**)
IT **287923-92-6P 753003-49-5DP**, hydrolized
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of **silicon**-containing fluorinated polymers for **photoresists**)
RN 287923-92-6 HCAPLUS
CN Methanesulfonamide, N-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-1,1,1-trifluoro- (9CI) (CA INDEX NAME)

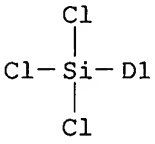


RN 753003-49-5 HCAPLUS
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(trichlorosilyl)-, 2-(acetyloxy)ethyl ester, polymer with 5(or 6)-(trichlorosilyl)-α,α-bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol, hydrolytic (9CI) (CA INDEX NAME)

CM 1

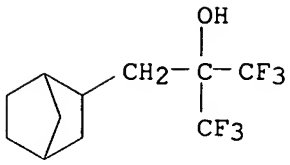
CRN 799763-31-8
CMF C12 H17 Cl3 O4 Si
CCI IDS

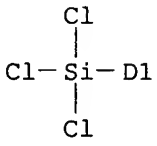




CM 2

CRN 461053-88-3
CMF C11 H13 Cl3 F6 O Si
CCI IDS





CM 3

CRN 7732-18-5
CMF H2 O

H_2O

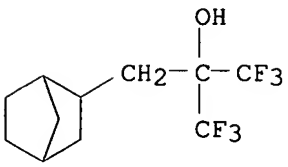
IT **753003-44-0P 753003-46-2P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of **silicon**-containing fluorinated polymers for **photoresists**)

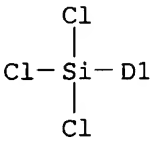
RN 753003-44-0 HCAPLUS

CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(trichlorosilyl)-, 1,1-dimethylethyl ester, polymer with 5(or 6)-(trichlorosilyl)-α,α-bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol, hydrolytic (9CI) (CA INDEX NAME)

CM 1

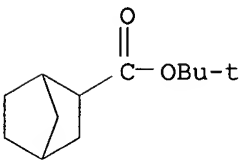
CRN 461053-88-3
CMF C11 H13 C13 F6 O Si
CCI IDS

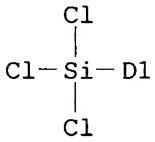




CM 2

CRN 365546-65-2
CMF C12 H19 Cl3 O2 Si
CCI IDS





CM 3

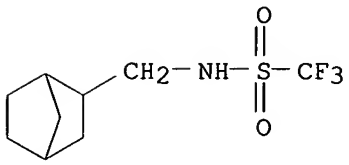
CRN 7732-18-5
CMF H2 O

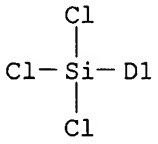
H_2O

RN 753003-46-2 HCAPLUS
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(trichlorosilyl)-, 1,1-dimethylethyl ester, polymer with 1,1,1-trifluoro-N-[[5(or 6)-(trichlorosilyl)bicyclo[2.2.1]hept-2-yl]methyl]methanesulfonamide, hydrolytic (9CI) (CA INDEX NAME)

CM 1

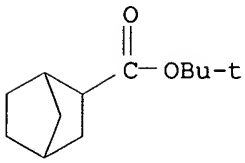
CRN 799763-30-7
CMF C9 H13 Cl3 F3 N O2 S Si
CCI IDS

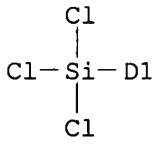




CM 2

CRN 365546-65-2
CMF C12 H19 Cl3 O2 Si
CCI IDS





CM 3

CRN 7732-18-5
CMF H2 O

H_2O

L45 ANSWER 3 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:370969 HCAPLUS
DN 140:397367

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI **Photoresists** containing sulfonamide component
IN Barclay, George G.; Kanagasabapathy, Subbareddy
PA Shipley Company L.L.C., USA
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English

applicants

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004037866	A2	20040506	WO 2003-US33676	20031021
WO 2004037866	A3	20040805		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004212946	A2	20040729	JP 2003-361269	20031021
US 2004161698	A1	20040819	US 2003-690835	20031021
US 2004209187	A1	20041021	US 2003-690217	20031021
PRAI US 2002-420056P	P	20021021		

AB The present invention relates to **photoresist compns.** that contain one or more components having sulfonamide and Si substitution. Preferred **photoresist compns.** of the invention contain an Si-polymer such as a **silsesquioxane** that has sulfonamide substitution and may be employed in multilayer resist systems. In preferred aspects, the Si-polymer has both sulfonamide substitution as well as moieties that can provide contrast upon exposure to **photogenerated** acid.

IC ICM C08F
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38
ST **photoresist** sulfonamide component **silsesquioxane**
IT **Photoresists**
(**photoresists** containing sulfonamide component)
IT **Silsesquioxanes**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresists** containing sulfonamide component)
IT **685901-36-4P 685901-37-5P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresists** containing sulfonamide component)
IT 95-10-3, Bicyclo[2.2.1]hept-5-ene-2-methanamine 107-11-9, Allyl amine 124-63-0, Methanesulfonylchloride 421-83-0, Trifluoromethanesulfonylchloride 10025-78-2, Trichlorosilane 423166-18-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of sulfonamide component for **photoresists**)
IT **34310-32-2P 44584-35-2P 287923-92-6P** 631896-39-4P 685901-31-9P **685901-32-0P 685901-33-1P** 685901-34-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

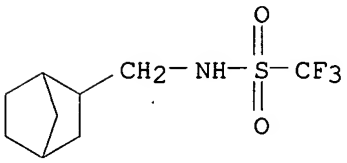
(preparation of sulfonamide component for **photoresists**)

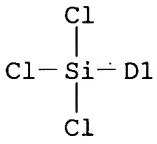
IT **685901-36-4P 685901-37-5P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresists** containing sulfonamide component)

RN 685901-36-4 HCAPLUS
RN 685901-37-5 HCAPLUS
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5-(trihydroxysilyl)-, 1,1-dimethylethyl ester, polymer with methylsilanetriol and 1,1,1-trifluoro-N-[[5-(trihydroxysilyl)bicyclo[2.2.1]hept-2-yl]methyl]methanesulfonamide (9CI) (CA INDEX NAME)

CM 1

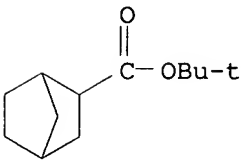
CRN 799763-30-7
CMF C9 H13 Cl3 F3 N O2 S Si
CCI IDS

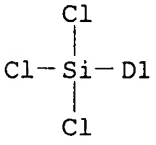




CM 2

CRN 365546-65-2
CMF C12 H19 Cl3 O2 Si
CCI IDS





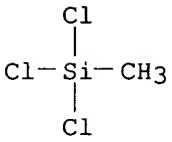
CM 3

CRN 7732-18-5
CMF H2 O

H_2O

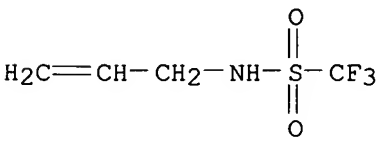
CM 4

CRN 75-79-6
CMF C H3 Cl3 Si

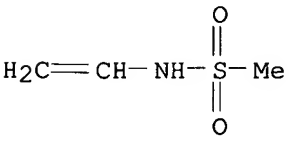


IT **34310-32-2P 44584-35-2P 287923-92-6P**
685901-32-0P 685901-33-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of sulfonamide component for **photoresists**)

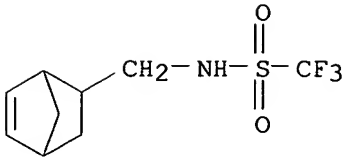
RN 34310-32-2 HCAPLUS
CN Methanesulfonamide, 1,1,1-trifluoro-N-2-propenyl- (9CI) (CA INDEX NAME)



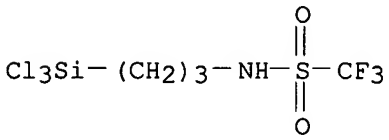
RN 44584-35-2 HCAPLUS
CN Methanesulfonamide, N-ethenyl- (9CI) (CA INDEX NAME)



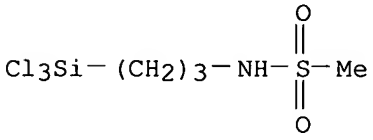
RN 287923-92-6 HCAPLUS
CN Methanesulfonamide, N-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-1,1,1-trifluoro- (9CI) (CA INDEX NAME)



RN 685901-32-0 HCAPLUS
CN Methanesulfonamide, 1,1,1-trifluoro-N-[3-(trichlorosilyl)propyl]- (9CI) (CA INDEX NAME)



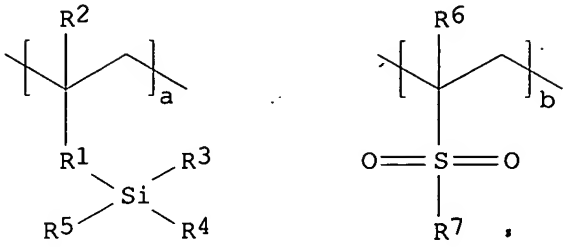
RN 685901-33-1 HCAPLUS
CN Methanesulfonamide, N-[3-(trichlorosilyl)propyl]- (9CI) (CA INDEX NAME)



L45 ANSWER 4 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:59649 HCAPLUS
DN 140:136424
TI **Silicon**-containing polymer, **photoresist composition** and patterning process
IN Hatakeyama, Jun; Takeda, Takanobu; Ishihara, Toshinobu
PA Japan
SO U.S. Pat. Appl. Publ., 36 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004013980	A1	20040122	US 2003-611261	20030702
	JP 2004083873	A2	20040318	JP 2003-180392	20030625
PRAI	JP 2002-192910	A	20020702		

GI



I

AB The present invention relates to **silicon**-containing polymers comprising recurring units of I (R1 = single bond, alkylene; R2 = hydrogen, alkyl; R3-5 = alkyl, haloalkyl, aryl or **silicon**-containing group; R6 = hydrogen, Me, cyano or -C(=O)OR8; R8 = hydrogen, alkyl, acid labile group; R7 = alkyl, -NR9R10, -OR11; R9-11 = hydrogen or alkyl; a, b = pos. nos. satisfying 0<a+b≤1). Resist **compns.** comprising the polymers are sensitive to high-energy radiation and have a high sensitivity and resolution at a wavelength of less than 300 nm and improved resistance to oxygen plasma etching.

IC ICM H01B001-00
ICS C08J003-00

NCL 430311000; 252500000; 524262000

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38

ST **silicon** polymer **photoresist compn** patterning process

IT **Photolithography**
Photoresists
(**silicon**-containing polymer, resist **composition** and patterning process)

IT **648895-18-5P 648895-19-6P 648895-20-9P**
648895-21-0P 648895-22-1P 648895-23-2P
648895-24-3P 648895-25-4P 648895-26-5P
648895-27-6P 648895-28-7P 648895-29-8P
648895-30-1P 648895-31-2P 648895-33-4P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**silicon**-containing polymer, **resist composition** for patterning process)

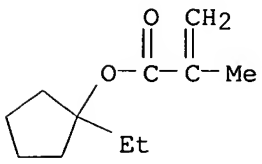
IT **648895-18-5P 648895-19-6P 648895-20-9P**
648895-21-0P 648895-22-1P 648895-23-2P
648895-24-3P 648895-25-4P 648895-26-5P
648895-27-6P 648895-28-7P 648895-29-8P
648895-30-1P 648895-31-2P 648895-33-4P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**silicon**-containing polymer, **resist composition** for patterning process)

RN 648895-18-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenyltrimethylsilane, 2,5-furandione and (methylsulfonyl)ethene (9CI) (CA INDEX NAME)

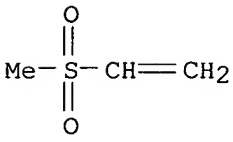
CM 1

CRN 266308-58-1
CMF C11 H18 O2



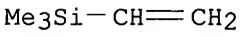
CM 2

CRN 3680-02-2
CMF C3 H6 O2 S



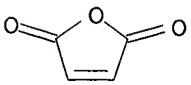
CM 3

CRN 754-05-2
CMF C5 H12 Si



CM 4

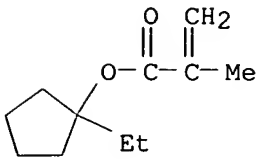
CRN 108-31-6
CMF C4 H2 O3



RN 648895-19-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenyltrimethylsilane and 2-(methylsulfonyl)-2-propenenitrile (9CI) (CA INDEX NAME)

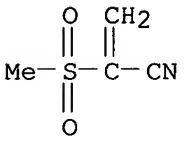
CM 1

CRN 266308-58-1
CMF C11 H18 O2



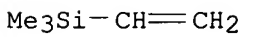
CM 2

CRN 98019-63-7
CMF C4 H5 N O2 S



CM 3

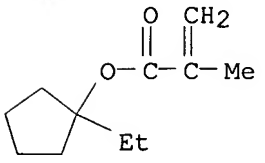
CRN 754-05-2
CMF C5 H12 Si



RN 648895-20-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenyltrimethylsilane and methyl 2-(methylsulfonyl)-2-propenoate (9CI) (CA INDEX NAME)

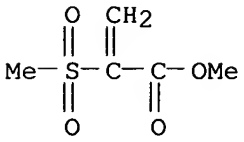
CM 1

CRN 266308-58-1
CMF C11 H18 O2



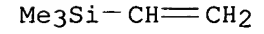
CM 2

CRN 73017-61-5
CMF C5 H8 O4 S



CM 3

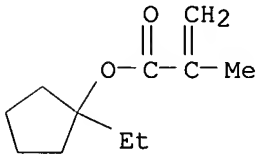
CRN 754-05-2
CMF C5 H12 Si



RN 648895-21-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with N,N-dimethylethenesulfonamide and ethenyltrimethylsilane (9CI) (CA INDEX NAME)

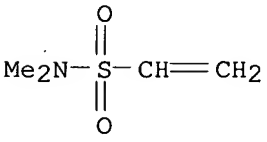
CM 1

CRN 266308-58-1
CMF C11 H18 O2



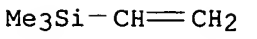
CM 2

CRN 7700-07-4
CMF C4 H9 N O2 S



CM 3

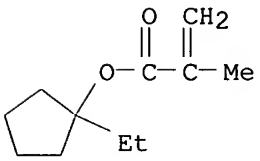
CRN 754-05-2
CMF C5 H12 Si



RN 648895-22-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenyltrimethylsilane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

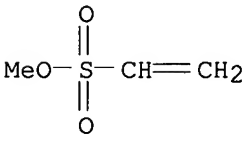
CM 1

CRN 266308-58-1
CMF C11 H18 O2



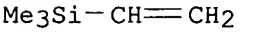
CM 2

CRN 1562-31-8
CMF C3 H6 O3 S



CM 3

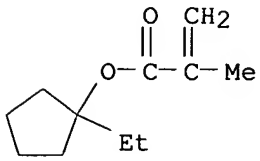
CRN 754-05-2
CMF C5 H12 Si



RN 648895-23-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with methyl ethenesulfonate and trimethyl-2-propenylsilane (9CI) (CA INDEX NAME)

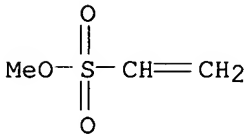
CM 1

CRN 266308-58-1
CMF C11 H18 O2



CM 2

CRN 1562-31-8
CMF C3 H6 O3 S



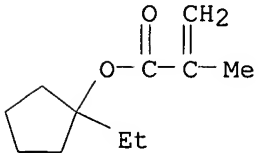
CM 3

CRN 762-72-1
CMF C6 H14 Si

RN 648895-24-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenylpentamethyldisiloxane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

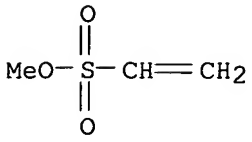
CM 1

CRN 266308-58-1
CMF C11 H18 O2



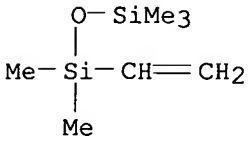
CM 2

CRN 1562-31-8
CMF C3 H6 O3 S



CM 3

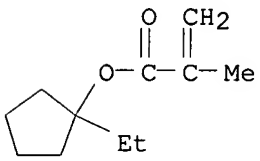
CRN 1438-79-5
CMF C7 H18 O Si2



RN 648895-25-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with [(ethenyldimethylsilyl)methyl]trimethylsilane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

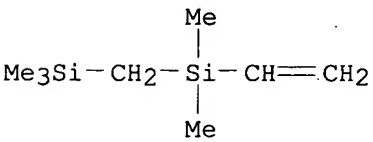
CM 1

CRN 266308-58-1
CMF C11 H18 O2



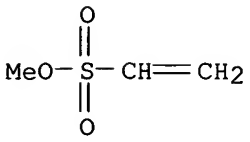
CM 2

CRN 18291-20-8
CMF C8 H20 Si2



CM 3

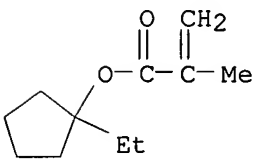
CRN 1562-31-8
CMF C3 H6 O3 S



RN 648895-26-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenylmethylbis[(trimethylsilyl)methyl]silane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

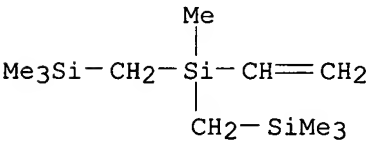
CM 1

CRN 266308-58-1
CMF C11 H18 O2



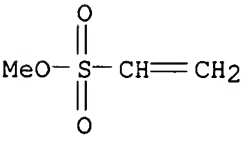
CM 2

CRN 16709-90-3
CMF C11 H28 Si3



CM 3

CRN 1562-31-8
CMF C3 H6 O3 S

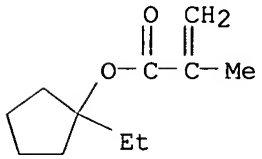


RN 648895-27-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenylheptamethylcyclotetrasiloxane and methyl ethenesulfonate (9CI) (CA

INDEX NAME)

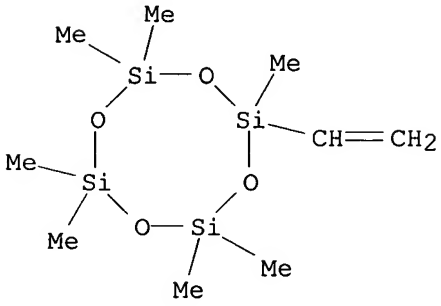
CM 1

CRN 266308-58-1
CMF C11 H18 O2



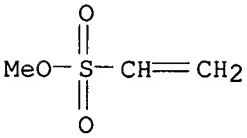
CM 2

CRN 3763-39-1
CMF C9 H24 O4 Si4



CM 3

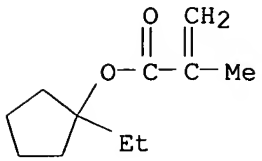
CRN 1562-31-8
CMF C3 H6 O3 S



RN 648895-28-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with heptamethyl-2-propenylcyclotetrasiloxane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

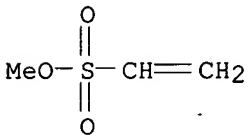
CM 1

CRN 266308-58-1
CMF C11 H18 O2



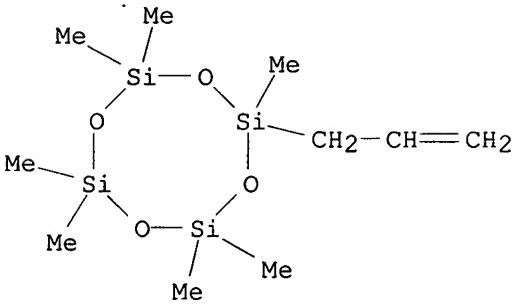
CM 2

CRN 1562-31-8
CMF C3 H6 O3 S



CM 3

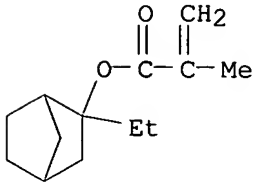
CRN 1087-58-7
CMF C10 H26 O4 Si4



RN 648895-29-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with ethenylheptamethylcyclotetrasiloxane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

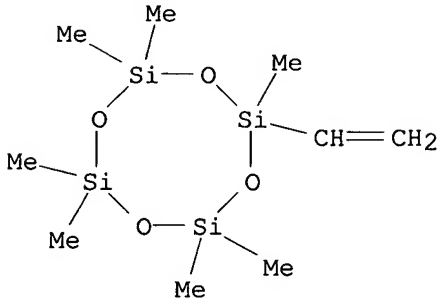
CM 1

CRN 330595-98-7
CMF C13 H20 O2



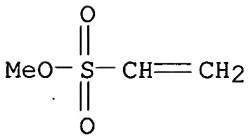
CM 2

CRN 3763-39-1
CMF C9 H24 O4 Si4



CM 3

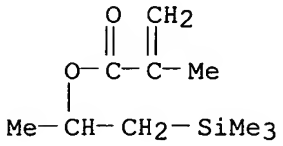
CRN 1562-31-8
CMF C3 H6 O3 S



RN 648895-30-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-methyl-2-(trimethylsilyl)ethyl ester, polymer with ethenylheptamethylcyclotetrasiloxane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

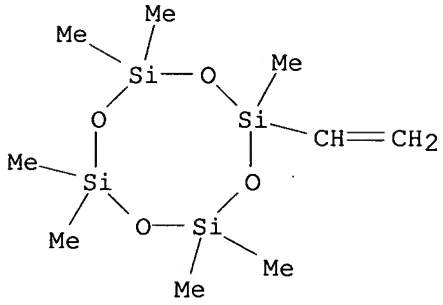
CM 1

CRN 409320-43-0
CMF C10 H20 O2 Si



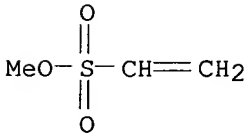
CM 2

CRN 3763-39-1
CMF C9 H24 O4 Si4



CM 3

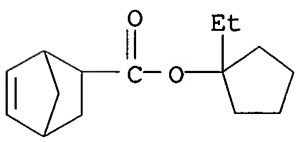
CRN 1562-31-8
CMF C3 H6 O3 S



RN 648895-31-2 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1-ethylcyclopentyl ester, polymer with ethenylheptamethylcyclotetrasiloxane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

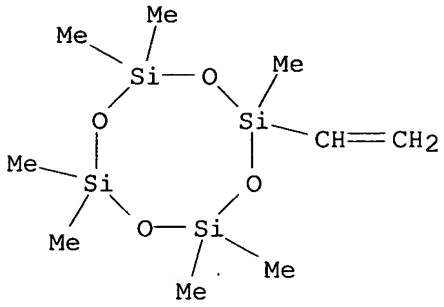
CM 1

CRN 279243-69-5
CMF C15 H22 O2



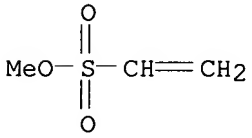
CM 2

CRN 3763-39-1
CMF C9 H24 O4 Si4



CM 3

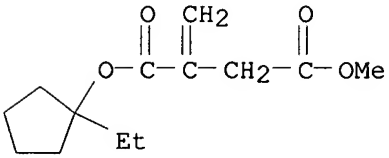
CRN 1562-31-8
CMF C3 H6 O3 S



RN 648895-33-4 HCAPLUS
CN Butanedioic acid, methylene-, 1-(1-ethylcyclopentyl) 4-methyl ester, polymer with ethenylheptamethylcyclotetrasiloxane and methyl ethenesulfonate (9CI) (CA INDEX NAME)

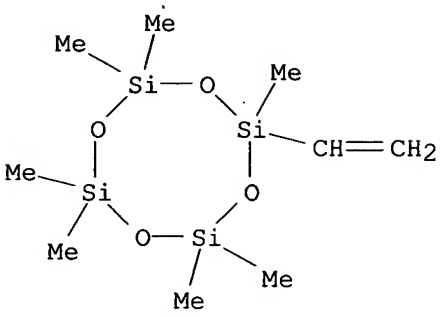
CM 1

CRN 648895-32-3
CMF C13 H20 O4



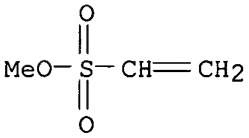
CM 2

CRN 3763-39-1
CMF C9 H24 O4 Si4



CM 3

CRN 1562-31-8
CMF C3 H6 O3 S



L45 ANSWER 5 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:107857 HCAPLUS
DN 136:158765
TI Method of producing a **photographic** image
IN Fyson, John R.; Evans, Gareth B.; Hewitson, Peter; Kapecki, Jon A.
PA Eastman Kodak Company, USA
SO U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002015922	A1	20020207	US 2001-853152	20010510
	US 6479223	B2	20021112		
	GB 2365139	A1	20020213	GB 2000-15894	20000628
	GB 2365139	B2	20030910		
	JP 2002049134	A2	20020215	JP 2001-194523	20010627
	EP 1276008	A1	20030115	EP 2001-202564	20010704
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI	GB 2000-15894	A	20000628		

AB A **photog.** processing method is described in which developer solution containing silver halide developing agent is applied in an imagewise manner to the **photog.** material (the amount of developer solution applied depends on the image d. to be produced). The unreacted developing agent is either removed from the material or inactivated in the material by means other than immersion in a liquid of a processing tank. In one embodiment, the removal of the unreacted developer can be done by

releasably laminating the developed **photog**. material with a receiver sheet containing (1) an adsorbent for oxidized and un-oxidized developer (this can be ion-exchange resin), and (2) a substance to solubilize Ag halide and /or a substance capable of converting soluble Ag into an insol. form. In another embodiment, inactivatation of the unreacted developer is done by application to the surface of developed material an oxidant solution capable of oxidizing the developing agent. The oxidant includes hydrogen sulfite or metabisulfite agent.

IC ICM G03C007-407
NCL 430404000
CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST processing **photog** image development step
IT **Photographic** development
(color; **photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)
IT **Polysiloxanes**, processes
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(di-Me, 3-hydroxypropyl Me, ethoxylated propoxylated, developer solution; **photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)
IT Color **photographic** processing
(**photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)
IT **25646-71-3**, Kodak CD3
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(CD3 developer agent; **photog**. processing in which developer is applied in **imagewise** manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)
IT 616-45-5, 2-Pyrrolidinone 1310-73-2, Sodium hydroxide, processes
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(developer **composition**; **photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)
IT 3710-84-7, N,N-Diethylhydroxylamine
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(developer solution; **photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)
IT 2809-21-4, 1-Hydroxyethylidene-1,1-diphosphonic acid
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(pre-soak **composition**, Anti Cal 5; **photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)
IT 140-01-2, Anti Cal 8
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(pre-soak **composition**, Anti Cal 8; **photog**. processing in

which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)

IT 7722-84-1, Hydrogen peroxide, processes
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(pre-soak **composition**; **photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)

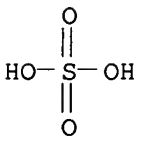
IT 64-19-7, Acetic acid, processes 7681-57-4, Sodium metabisulfite 7727-54-0, Ammonium persulfate 13746-66-2, Potassium hexacyanoferrate(III)
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(remediation solution; **photog**. processing in which developer is applied in imagewise manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)

IT **25646-71-3**, Kodak CD3
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); PROC (Process)
(CD3 developer agent; **photog**. processing in which developer is applied in **imagewise** manner and unreacted agents are removed or inactivated by means other than immersion in liquid processing tank)

RN 25646-71-3 HCAPLUS
CN Methanesulfonamide, N-[2-[(4-amino-3-methylphenyl)ethylamino]ethyl]-, sulfate (2:3) (9CI) (CA INDEX NAME)

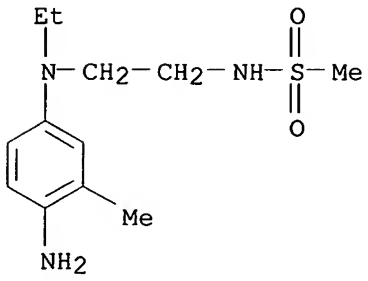
CM 1

CRN 7664-93-9
CMF H2 O4 S



CM 2

CRN 92-09-1
CMF C12 H21 N3 O2 S



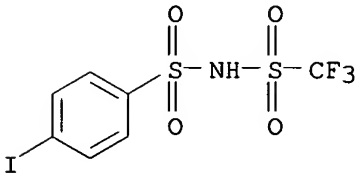
L45 ANSWER 6 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:107841 HCAPLUS
DN 136:175464
TI Synthesis of zwitterionic iodonium compounds for resist **compositions** transmitting light in low UV portion of spectrum
IN Desmarteau, Darryl; Montanari, Vitorio; Thomas, Brian H.
PA USA
SO U.S. Pat. Appl. Publ., 19 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002015826	A1	20020207	US 2001-832174	20010410
PRAI US 2000-196515P	P	20000411		

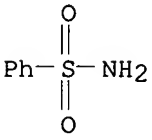
OS MARPAT 136:175464
AB Disclosed are the methods of synthetic preparation of zwitterionic iodonium compds. for resist **compns.** transmitting light in low UV portion of spectrum. **Photoresist compns.**, or **photoacids**, are used in etching circuit pathways on the surface of microelectronic components. Iodonium compds. generate a strong acid under short wavelength irradiation, which is capable of etching the polymeric surface coating of a **silicon** wafer. The strong acid is the conjugate acid of the counter anion. Larger counterions generate acids that diffuse to a lesser extent in the polymer resist matrix, producing better image resolution Given the particular anion, the solubility of its diary iodonium salts will depend upon which aromatic rings are used on the iodonium mol. A zwitterionic structure of the iodonium mol., having both pos. and neg. charges on the same mol. species, can be used as **photoacid composition** in the **photoresist** step of microchip manufacturing
IC ICM C07C025-02
ICS B32B003-30; C07C381-00; C07C321-00; C07C017-00; C07C323-00; C07C319-00; C07C323-09
NCL 428195000
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
ST iodonium salt zwitterion **photoacid photoresist** UV; semiconductor integrated circuit **photoresist** iodonium salt zwitterion **photoacid**
IT **Photoresists**
(UV; synthesis of zwitterionic iodonium compds. for resist **compns.** transmitting light in low UV portion of spectrum)

IT Onium compounds
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(iodonium; synthesis of zwitterionic iodonium compds. for resist **compns**. transmitting light in low UV portion of spectrum)
IT Zwitterions
(synthesis of zwitterionic iodonium compds. for resist **compns** . transmitting light in low UV portion of spectrum)
IT Semiconductor device fabrication
(synthesis of zwitterionic iodonium compds. for resist **compns** . transmitting light in low UV portion of spectrum for)
IT **396733-80-5**
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(intermediate; synthesis of zwitterionic iodonium compds. for **resist compns**. transmitting light in low UV portion of spectrum)
IT 1483-73-4P 1868-08-2P 6293-70-5P 6293-71-6P 19231-06-2P 24163-36-8P 94590-90-6P 102092-49-9P 397251-57-9P 397251-58-0P 397251-59-1P 397251-60-4P 397251-62-6P 397251-62-6P 397251-63-7P 397251-64-8P 397251-67-1P 397251-68-2P 397251-69-3P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(iodonium salt; synthesis of zwitterionic iodonium compds. for resist **compns**. transmitting light in low UV portion of spectrum)
IT 396733-88-3P 396733-91-8P 396733-94-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(iodonium zwitterion; synthesis of zwitterionic iodonium compds. for resist **compns**. transmitting light in low UV portion of spectrum)
IT **98-10-2**, Benzenesulfonamide 501-53-1 591-50-4, Phenyliodide **396733-83-8** 396733-96-3
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(synthesis of zwitterionic iodonium compds. for **resist compns**. transmitting light in low UV portion of spectrum)
IT 98-61-3P 4241-66-1P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(synthesis of zwitterionic iodonium compds. for resist **compns** . transmitting light in low UV portion of spectrum)
IT 396733-77-0DP, crystallized with DMSO
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis of zwitterionic iodonium compds. for resist **compns** . transmitting light in low UV portion of spectrum)
IT 396733-77-0
RL: TEM (Technical or engineered material use); USES (Uses)
(synthesis of zwitterionic iodonium compds. for resist **compns** . transmitting light in low UV portion of spectrum)
IT **396733-80-5**
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(intermediate; synthesis of zwitterionic iodonium compds. for **resist compns**. transmitting light in low UV portion of spectrum)
RN 396733-80-5 HCAPLUS

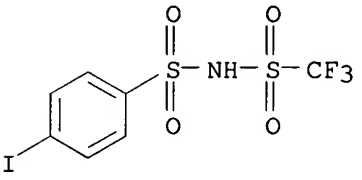
CN Benzenesulfonamide, 4-iodo-N-[(trifluoromethyl)sulfonyl]-, sodium salt (9CI) (CA INDEX NAME)



IT **98-10-2**, Benzenesulfonamide **396733-83-8**
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(synthesis of zwitterionic iodonium compds. for **resist compns.** transmitting light in low UV portion of spectrum)
RN 98-10-2 HCAPLUS
CN Benzenesulfonamide (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 396733-83-8 HCAPLUS
CN Benzenesulfonamide, 4-iodo-N-[(trifluoromethyl)sulfonyl]- (9CI) (CA INDEX NAME)



L45 ANSWER 7 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:867995 HCAPLUS
DN 136:12842
TI Positive resist **composition** and onium salts of saccharin derivatives
IN Kodama, Kunihiko; Kanna, Shinichi
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 73 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1158363	A1	20011128	EP 2001-111990	20010522
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001330947	A2	20011130	JP 2000-150217	20000522
	US 2002006578	A1	20020117	US 2001-860440	20010521
	US 6605409	B2	20030812		
PRAI	JP 2000-150217	A	20000522		

OS MARPAT 136:12842

AB A pos. resist **composition** comprises: (A) a compound generating a specific sulfonimide compound: R'S(:O)(:O)NHYR'' (Y = single bond, CO, SO2; R', R'' = alkyl, aryl, aralkyl, camphor group; R' and R'' may be bonded to each other to form an alkylene, arylene, aralkylene group) by irradiation with an actinic ray or a radiation; and (B) a resin having a group, which is decomposed by the action of an acid to increase the solubility of the **composition** in an alkali developer. The resist **composition** has an improved resolving power and an improved process allowance such as exposure margin and the depth of focus in a lithog. technique using a light source of short wavelengths capable of super fine working and a pos. chemical amplified resist.

IC ICM G03F007-004
ICS G03F007-039; C07C381-12; C07D275-06

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 35, 38

ST **photoresist** sulfonimide compd onium salt saccharin deriv

IT Positive **photoresists**
(sulfonimide compd and saccharin derivs. for)

IT Surfactants
(sulfonimide compd and saccharin derivs. for pos. resist **compn**.)

IT **Polysiloxanes**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(surfactant; pos. resist **composition** containing)

IT 14159-45-6 39153-56-5 66003-78-9 84563-54-2 138529-81-4 193345-23-2 197447-16-8 247589-67-9 258341-98-9 297742-41-7
RL: TEM (Technical or engineered material use); USES (Uses)
(**photo**-acid generator for pos. resist **composition**)

IT 60-12-8DP, Phenethanol, reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether, acetate 64-17-5DP, Ethanol, reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether 78-83-1DP, Isobutanol, reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether 100-51-6DP, Benzyl alcohol, reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether, acetate 108-24-7DP, Acetic anhydride, ester with poly(hydroxystyrene) alkoxyethyl ether derivs. 109-53-5DP, Isobutyl vinyl ether, oxyethylidene ether with Bu acrylate-hydroxystyrene copolymer 926-02-3DP, tert-Butyl vinyl ether, reaction products with poly(hydroxystyrene) and cyclohexylehtanol 4442-79-9DP, 2-Cyclohexylethanol, reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether 24979-70-2DP, VP8000, substituted 1-alkoxyethyl ethers, acetate 147625-42-1P, 4-Hydroxystyrene homopolymer tert-butyl carbonate 159296-87-4DP, tert-Butyl acrylate-p-hydroxystyrene copolymer, isobutyoxyether ether 159296-87-4P, tert-Butyl acrylate-p-hydroxystyrene copolymer 200808-68-0P, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer 376359-28-3DP, reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether, acetate 376359-32-9DP, 4-tert-Butylstyrene-4-hydroxystyrene copolymer, reaction products with cyclohexylethanol and tert-Bu vinyl ether

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymer resin for pos. resist **composition**)

IT 153698-63-6
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. resist **composition** containing)

IT 376357-65-2P 376357-70-9P 376357-77-6P 376357-83-4P 376357-88-9P
376357-89-0P 376357-95-8P 376358-03-1P 376358-13-3P 376358-18-8P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. resist **composition** containing saccharin derivs. as **photo**-acid generator)

IT 376358-25-7 376358-32-6 376358-38-2 376358-44-0 376358-50-8
376358-58-6 **376358-65-5** 376358-72-4 376358-78-0
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **resist composition** containing saccharin derivs. as **photo**-acid generator)

IT 81-07-2, Saccharin 2217-79-0, Diphenyliodonium iodide 3744-08-9, Triphenylsulfonium iodide 3744-09-0 111329-06-7 203927-87-1
365971-60-4 376357-62-9 376357-74-3 376357-81-2 376357-86-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of saccharin derivs. for pos. resist **composition**)

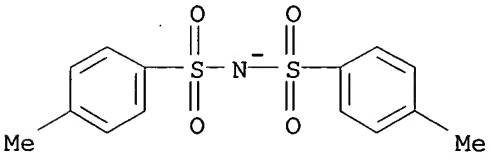
IT 137462-24-9, Megafac F176 216679-67-3, Megafac R08
RL: TEM (Technical or engineered material use); USES (Uses)
(surfactant; pos. resist **composition** containing)

IT **376358-65-5**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **resist composition** containing saccharin derivs. as **photo**-acid generator)

RN 376358-65-5 HCAPLUS
CN Sulfonium, triphenyl-, salt with 4-methyl-N-[(4-methylphenyl)sulfonyl]benzenesulfonamide (1:1) (9CI) (CA INDEX NAME)

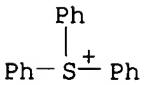
CM 1

CRN 49870-17-9
CMF C14 H14 N O4 S2



CM 2

CRN 18393-55-0
CMF C18 H15 S



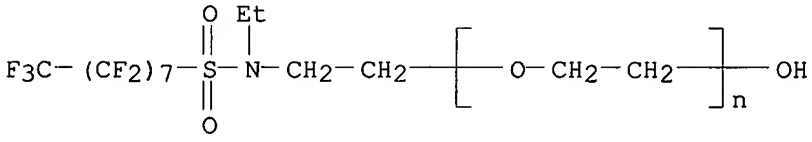
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 8 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:688478 HCAPLUS
DN 133:288866
TI **Photosensitive** resin resist **composition** for roll coating and method for roll coating using same
IN Yamamoto, Kenji
PA Clariant International Ltd., Switz.
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000057248	A1	20000928	WO 2000-JP1208	20000301
	W: CN, KR, SG, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 2000267270	A2	20000929	JP 1999-75739	19990319
	EP 1170632	A1	20020109	EP 2000-906609	20000301
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	TW 500977	B	20020901	TW 2000-89104827	20000316
PRAI	JP 1999-75739	A	19990319		
	WO 2000-JP1208	W	20000301		

AB The title **photosensitive** resin resist **composition** is suitable for application by roll coating process and comprises an alkali-soluble resin, a **photosensitizer**, and a nonionic fluorochem. or **silicone** surfactant. The **composition** provides the coating of the even thickness.
IC ICM G03F007-004
ICS C08L101-00
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 42
ST **photosensitive** resin resist **compn** roll coating
IT **Polysiloxanes**, preparation
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(alkyl, Polyflow KL 245; surfactant in resist **composition** for roll coating)
IT Phenolic resins, preparation
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(novolak; **photosensitive** alkali-soluble resin in resist **composition** for roll coating)
IT **Photoresists**
(**photosensitive** resin in resist **composition** for roll coating and method of roll coating using same)
IT Coating process
(roller; **photosensitive** resin in resist **composition** for roll coating and method of roll coating using same)
IT 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photosensitive** alkali-soluble resin in resist **composition**

for roll coating)
IT 38638-43-6, 1,2-Naphthoquinonediazide-5-sulfonyl chloride 129726-78-9, 2,3,4'-Trihydroxybenzophenone
RL: RCT (Reactant); RACT (Reactant or reagent)
(**photosensitizer** in resist **composition** for roll coating)
IT 299190-91-3P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photosensitizer** in resist **composition** for roll coating)
IT **29117-08-6P**, Fluorad FC 170C 85568-55-4P, Megafac 142D 299190-83-3P, Megafac F 472
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(surfactant in **resist composition** for roll coating)
IT **29117-08-6P**, Fluorad FC 170C
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(surfactant in **resist composition** for roll coating)
RN 29117-08-6 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-ω-hydroxy- (9CI) (CA INDEX NAME)

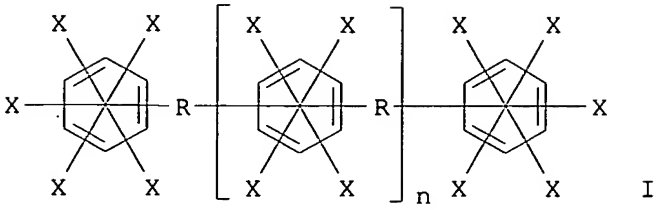


RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 9 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:783309 HCAPLUS
DN 132:42829
TI Positively-working **photosensitive** polyimide precursor **composition** and formation of relief pattern using the **composition**
IN Okaba, Kaori; Fujieda, Nagatoshi
PA Hitachi Chemical Du Pont Micro System Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11338143	A2	19991210	JP 1998-139626	19980521
PRAI	JP 1998-139626		19980521		

GI



AB The title **composition** contains a 5-60%-imidized polyamic acid, a naphthoquinonediazide compound, and a phenolic OH-containing compound I (n = 0-3; X = H, OH, amino, monovalent organic group; ≥1 of X in 1 aromatic ring is OH; R = single bond, divalent aliphatic group). The **composition** is applied on a substrate, dried, patternwise irradiated with an active beam, developed with an aqueous alkali solution, and heated to form a relief pattern. The **composition** shows high sensitivity toward i-line and improved developability and provides a high resolution relief pattern. The **composition** is suitable for semiconductor device fabrication.

IC ICM G03F007-037
ICS G03F007-00; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38

ST pos working **photoresist** polyimide precursor; partially imidized polyamic acid **photoresist** relief; naphthoquinonediazide phenolic compd pos working **photoresist**

IT Embossing
Positive **photoresists**
Semiconductor device fabrication
(pow. working **photoresist** containing partially imidized polyamic acid, naphthoquinonediazide, and phenolic compound for relief patterning)

IT Polyamic acids
Polyimides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pow. working **photoresist** containing partially imidized polyamic acid, naphthoquinonediazide, and phenolic compound for relief patterning)

IT 114571-69-6P **125677-73-8P 205829-59-0P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pow. working **photoresist** containing partially imidized polyamic acid, naphthoquinonediazide, and phenolic compound for relief patterning)

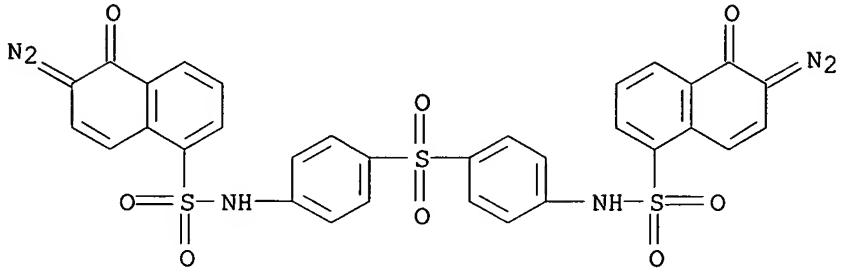
IT 2081-08-5, 4,4'-Ethylidenebisphenol 20837-68-7 146368-31-2
RL: TEM (Technical or engineered material use); USES (Uses)
(pow. working **photoresist** containing partially imidized polyamic acid, naphthoquinonediazide, and phenolic compound for relief patterning)

IT 80-08-0, 4,4'-Diaminodiphenylsulfone
RL: RCT (Reactant); RACT (Reactant or reagent)
(pow. working **photoresist** containing partially imidized polyamic acid, phenolic compound, and naphthoquinonediazide from)

IT **125677-73-8P 205829-59-0P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pow. working **photoresist** containing partially imidized polyamic acid, naphthoquinonediazide, and phenolic compound for relief patterning)

RN 125677-73-8 HCAPLUS

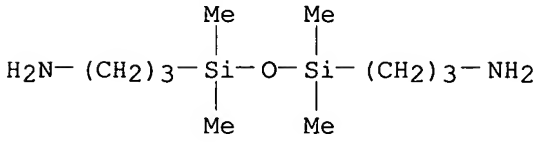
CN 1-Naphthalenesulfonamide, N,N'-(sulfonyldi-4,1-phenylene)bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)



RN 205829-59-0 HCAPLUS
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 2,2'-dimethyl[1,1'-biphenyl]-4,4'-diamine, 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

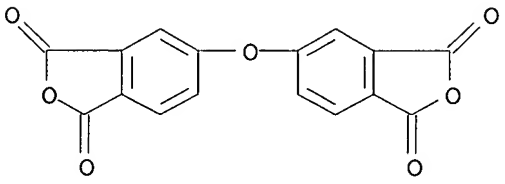
CM 1

CRN 2469-55-8
CMF C10 H28 N2 O Si2



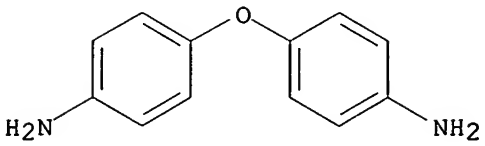
CM 2

CRN 1823-59-2
CMF C16 H6 O7



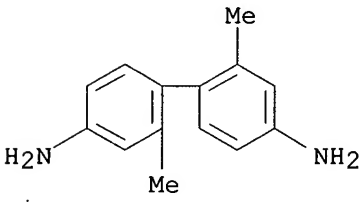
CM 3

CRN 101-80-4
CMF C12 H12 N2 O



CM 4

CRN 84-67-3
CMF C14 H16 N2



L45 ANSWER 10 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:752377 HCAPLUS
DN 132:7565
TI Positive-working **photosensitive** resin **composition** useful in production of semiconductor devices
IN Kawabe, Yasumasa; Sato, Kenichiro; Aogo, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11327145	A2	19991126	JP 1998-132291	19980514
PRAI	JP 1998-132291		19980514		

AB The title resin **composition** contains (a) a cyclic aliphatic hydrocarbon skeleton structure-containing polymer that is decomposed by the action of acid to become alkali-soluble, (b) a compound that generates an acid upon active ray or radiation irradiation, (c) a sulfonamide structure-containing compound with mol. weight ≤1000, (d) a N-containing basic compound, and (e) a F-type and/or Si-type surfactant. The **composition** shows improved developability and provides a high resolution pattern with good profile by using deep UV rays, especially, ArF excimer laser beams and is useful for manufacture of semiconductor devices.

IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 76
ST **photoresist** alkali soluble polymer alicyclic hydrocarbon; sulfonamide **photoresist**; nitrogen basic compd **photoresist**; surfactant **photoresist**; semiconductor

device **photoresist**

IT **Polysiloxanes**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(KP 341; **photoresist composition** containing alkali-soluble polymer, acid generator, sulfonamide, basic compound, and surfactant)

IT Surfactants
(fluorosurfactants; **photoresist composition** containing alkali-soluble polymer, acid generator, sulfonamide, basic compound, and surfactant)

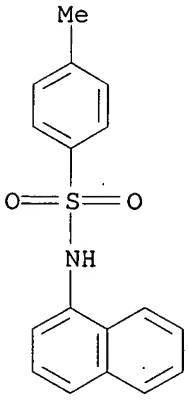
IT **Photoresists**
(**photoresist composition** containing alkali-soluble polymer, acid generator, sulfonamide, basic compound, and surfactant)

IT 122752-67-4, tert-Butyl cholate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing alkali-soluble polymer, acid generator, sulfonamide, basic compound, and surfactant)

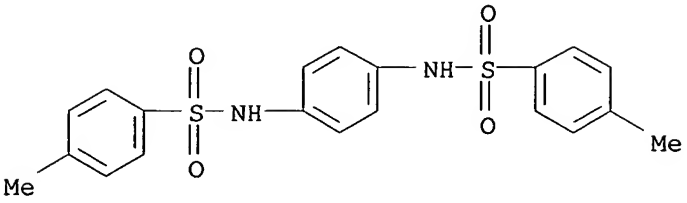
IT 100-97-0, uses 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2 **18271-17-5** **41595-29-3** 66003-78-9, Triphenylsulfonium triflate 137462-24-9, Megafac F176 169223-77-2, 1-Adamantyl acrylate-tert-butyl acrylate copolymer 195143-37-4, Acrylic acid-tert-butyl acrylate-maleic anhydride-norbornene copolymer 216679-67-3, Megafac R08 **222170-69-6** 251294-50-5 251294-52-7 **251294-53-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing alkali-soluble polymer, acid generator, sulfonamide, basic compound, and surfactant)

IT **18271-17-5 41595-29-3 222170-69-6** **251294-53-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing alkali-soluble polymer, acid generator, sulfonamide, basic compound, and surfactant)

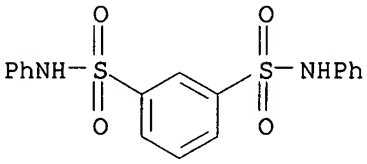
RN 18271-17-5 HCAPLUS
CN Benzenesulfonamide, 4-methyl-N-1-naphthalenyl- (9CI) (CA INDEX NAME)



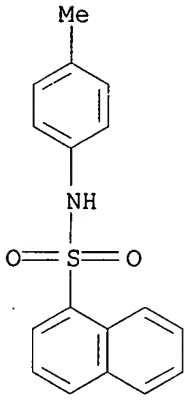
RN 41595-29-3 HCAPLUS
CN Benzenesulfonamide, N,N'-1,4-phenylenebis[4-methyl- (9CI) (CA INDEX NAME)



RN 222170-69-6 HCAPLUS
CN 1,3-Benzenedisulfonamide, N,N'-diphenyl- (9CI) (CA INDEX NAME)



RN 251294-53-8 HCAPLUS
CN 1-Naphthalenesulfonamide, N-(4-methylphenyl)- (9CI) (CA INDEX NAME)



L45 ANSWER 11 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:498654 HCAPLUS
DN 131:163387
TI **Photoresist composition** and pattern formation
IN Sone, Atsushi
PA Nippon Zeon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11218927	A2	19990810	JP 1998-23499	19980204
PRAI	JP 1998-23499		19980204		

AB The **composition** contains a polymer comprising acid-eliminating

alicyclic hydrocarbon group-containing repeating units, an acid generator, and a surfactant. The method involves applying the **composition** on a substrate and exposing using a light source with wavelength 180-250 nm. The **composition** shows excellent dry etching resistance and high transparency to an ArF excimer laser. An excellent pattern shape is manufactured using the **composition** with improved striation.

IC ICM G03F007-039
ICS G03F007-004; G03F007-20; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38, 46

ST **photoresist compn** alicyclic hydrocarbon polymer surfactant; pattern formation **photoresist** etching resistance

IT Surfactants
(nonionic; **photoresist composition** containing surfactant and alicyclic hydrocarbon-containing polymer)

IT **Photoresists**
Surfactants
(**photoresist composition** containing surfactant and alicyclic hydrocarbon-containing polymer)

IT **Polysiloxanes**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing surfactant and alicyclic hydrocarbon-containing polymer)

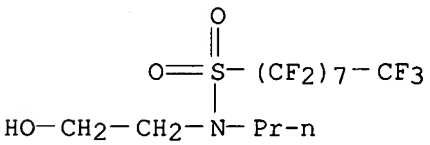
IT 177080-68-1P, 2-Methyl-2-adamantyl methacrylate-mevaloniclactone methacrylate copolymer 237073-22-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresist composition** containing surfactant and alicyclic hydrocarbon-containing polymer)

IT **4236-15-1**, Eftop EF 121 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 82030-85-1, Surflon S 145 85568-56-5, Megafac F 177
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing surfactant and alicyclic hydrocarbon-containing polymer)

IT **4236-15-1**, Eftop EF 121
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing surfactant and alicyclic hydrocarbon-containing polymer)

RN 4236-15-1 HCAPLUS

CN 1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-N-propyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L45 ANSWER 12 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:365905 HCAPLUS
DN 131:65895
TI Positive-working **photosensitive** polyimide precursor and relief pattern formation using it
IN Okaba, Kaori; Fujieda, Nagatoshi; Watanabe, Naoki

PA Hitachi Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

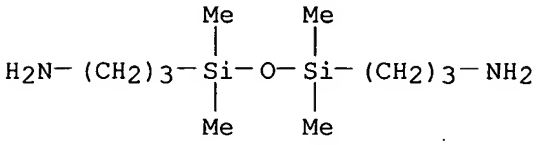
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11153868	A2	19990608	JP 1997-318081	19971119
PRAI JP 1997-318081		19971119		

AB The polyimide precursor **composition** comprises a polyamic acid with imidation degree 5-60% and a compound generating acid by light. The relief pattern is formed by coating the **composition** on a substrate, drying, irradiating, developing with an aqueous alkaline solution, and heat-treating. The **composition** is sensitive to i-ray, developable with aqueous alkaline solution even when the layer is thick, and gives clear relief patterns.
IC ICM G03F007-039
ICS C08G073-10; C08L079-08; G03F001-08; G03F007-022; G03F007-037; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 38
ST **photoresist** polyamic acid polyimide; relief pattern formation **photoresist** acid generator
IT **Photoresists**
(**photoresist composition** containing imidation degree-controlled polyamic acid and **photo**-acid generator)
IT Polyimides, uses
Polyimides, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(polyamic acid-; **photoresist composition** containing imidation degree-controlled polyamic acid and **photo**-acid generator)
IT Polyamic acids
Polyamic acids
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(polyimide-; **photoresist composition** containing imidation degree-controlled polyamic acid and **photo**-acid generator)
IT **151402-72-1 205829-59-0**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing imidation degree-controlled polyamic acid and **photo**-acid generator)
IT 105935-62-4 **125677-73-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing imidation degree-controlled polyamic acid and **photo**-acid generator)
IT **151402-72-1 205829-59-0**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing imidation degree-controlled polyamic acid and **photo**-acid generator)
RN 151402-72-1 HCAPLUS
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-

propanamine] (9CI) (CA INDEX NAME)

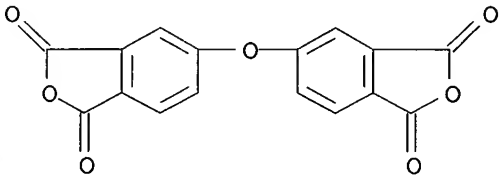
CM 1

CRN 2469-55-8
CMF C10 H28 N2 O Si2



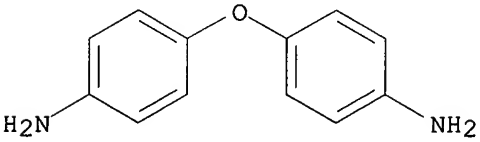
CM 2

CRN 1823-59-2
CMF C16 H6 O7



CM 3

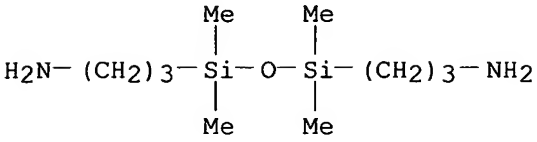
CRN 101-80-4
CMF C12 H12 N2 O



RN 205829-59-0 HCAPLUS
CN 1,3-Isobenzofurandione, 5,5'-oxybis-, polymer with 2,2'-dimethyl[1,1'-biphenyl]-4,4'-diamine, 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

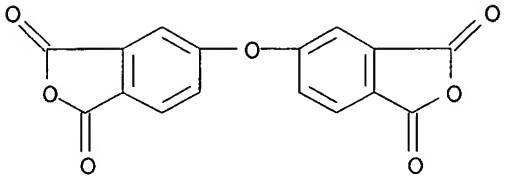
CM 1

CRN 2469-55-8
CMF C10 H28 N2 O Si2



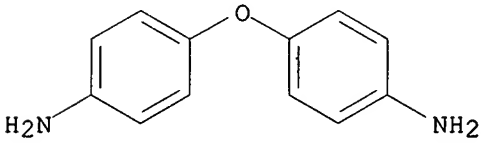
CM 2

CRN 1823-59-2
CMF C16 H6 O7



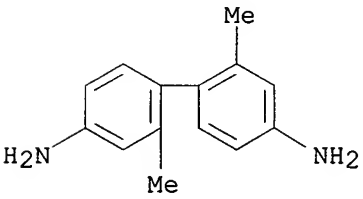
CM 3

CRN 101-80-4
CMF C12 H12 N2 O



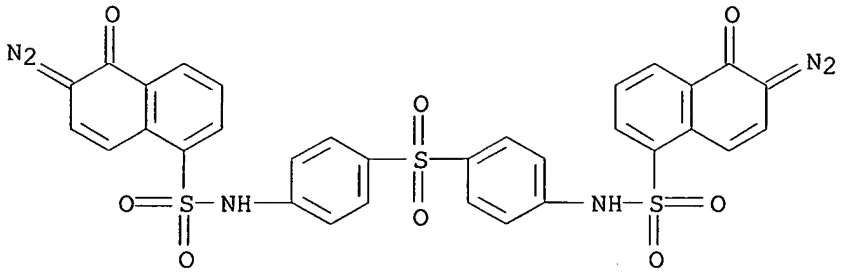
CM 4

CRN 84-67-3
CMF C14 H16 N2



IT **125677-73-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist composition** containing imidation degree-controlled polyamic acid and **photo**-acid generator)
RN 125677-73-8 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-(sulfonyldi-4,1-phenylene)bis[6-diazo-5,6-

dihydro-5-oxo- (9CI) (CA INDEX NAME)



L45 ANSWER 13 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:800085 HCAPLUS
DN 130:59115
TI Methods of imaging and printing with positive-working IR-sensitive lithographic plate
IN Miller, Gary A.; Felker, Melanie A.; West, Paul R.; Gurney, Jeffery A.; Haley, Neil F.
PA Kodak Polychrome Graphics, L.L.C., USA
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9854621	A1	19981203	WO 1998-US8779	19980430
	W: CA, CN, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6083662	A	20000704	US 1997-866736	19970530
	EP 985166	A1	20000315	EP 1998-918883	19980430
	R: DE, FR, GB				
PRAI	US 1997-866736	A	19970530		
	WO 1998-US8779	W	19980430		

AB A pos.-working IR-sensitive lithog. plate is used to provide a pos. image without a post-exposure baking step and without any floodwise exposure steps. The lithog. plate includes a layer that is imageable using an IR laser. This layer consists essentially of a phenolic resin, an IR-absorbing compound, and a dissoln. inhibitor that is nonphotosensitive and is capable of providing sites for hydrogen bonding with the phenolic moieties of the binder resin. The lithog. plate is developed with an alkaline **composition** that includes an alkali metal silicate, a thickener, and a fluorosurfactant or phosphate ester hydrotrope.
IC ICM G03F007-32
ICS B41C001-10
CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
IT Polyethers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(di-Me **siloxane**-; pos. IR-sensitive **photoimaging compns.** for lithog. plate preparation containing)
IT **Polysiloxanes**, uses
Polysiloxanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(di-Me, polyether-; pos. IR-sensitive **photoimaging compns.** for lithog. plate preparation containing)

IT Carbon black, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. IR-sensitive **photoimaging compns.** for lithog. plate preparation containing)

IT Lithographic plates
(pos. **photoimaging compns.** containing phenolic resins, IR-absorbing compds., and nonphotosensitive dissociation inhibitors for preparation of)

IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoimaging compns.** for lithog. plate preparation containing IR-absorbing compds., nonphotosensitive dissociation inhibitors and)

IT **Photoimaging** materials
(pos.; containing phenolic resins, IR-absorbing compds., and nonphotosensitive dissociation inhibitors for preparation of lithog. plates)

IT 56-81-5, 1,2,3-Propanetriol, uses 1310-58-3, Potassium hydroxide, uses 1312-76-1, Kasil 2130 37281-48-4, Triton H-66 57534-41-5, Zonyl FSN
RL: TEM (Technical or engineered material use); USES (Uses)
(developing solns. for pos. IR-sensitive **photoimaging compns.** for lithog. plate preparation containing)

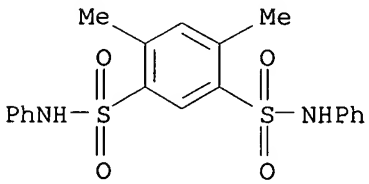
IT 604-59-1, α-Naphthoflavone **143182-20-1**, 4,6-Dimethyl-N,N'-diphenyl-1,3-benzenesulfonamide 202009-44-7, CG-21-1005
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. IR-sensitive **photoimaging compns.** for lithog. plate preparation containing)

IT 9016-83-5, Cresol-formaldehyde copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoimaging compns.** for lithog. plate preparation containing IR-absorbing compds., nonphotosensitive dissociation inhibitors and)

IT **143182-20-1**, 4,6-Dimethyl-N,N'-diphenyl-1,3-benzenesulfonamide
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. IR-sensitive **photoimaging compns.** for lithog. plate preparation containing)

RN 143182-20-1 HCAPLUS

CN 1,3-Benzenedisulfonamide, 4,6-dimethyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 14 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:608495 HCAPLUS
DN 129:237670

TI Heat-resistant **photosensitive** polymer **composition** for forming patterns for semiconductor device fabrication

IN Nunomura, Masataka; Sasaki, Mamoru; Uchimura, Shunichiro; Ohe, Masayuki; Nishio, Shigeru
PA Hitachi Chemical Co., Ltd., Japan

SO Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 863436	A1	19980909	EP 1998-103712	19980303
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 10239842	A2	19980911	JP 1997-47457	19970303
	JP 10333332	A2	19981218	JP 1997-138347	19970528
	JP 11084653	A2	19990326	JP 1997-246813	19970911
PRAI	JP 1997-47457	A	19970303		
	JP 1997-138347	A	19970528		
	JP 1997-246813	A	19970911		

AB The present invention provides a heat-resistant pos.-tone **photosensitive** polymer **composition** capable of forming a heat-resistant polyimide usable as a buffer coating for an electronic component or as an interlayer dielec. film by heat treatment for semiconductor device fabrication. This **composition** comprises (a) a polyimide precursor or a polyimide having a carboxyl group or a phenolic hydroxyl group, (b) a polyamic acid having a **siloxane** bond, and (c) a **photoacid** generator.

IC ICM G03F007-075
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
ST pos **photopolymer compn photoacid** polyimide pattern; polyamic acid **siloxane** pos **photopolymer compn**

IT Polyimides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoimaging compns**. for forming heat-resistant dielec. patterns of)

IT Semiconductor devices
(pos. **photoimaging compns**. for forming heat-resistant dielec. polyimide patterns for fabrication of)

IT Polyamic acids
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoimaging compns**. for heat-resistant dielec. pattern formation containing)

IT **Photoimaging** materials
(pos.; containing **photoacid** generators, polyimide precursors, and polyamic acids for heat-resistant dielec. pattern formation)

IT **125677-72-7 125677-73-8** 138636-86-9
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**photoimaging compns**. for heat-**resistant** pattern formation containing polyamic acids and)

IT 27044-05-9P, Dibutyl pyromellitate 28904-27-0P, Dibutyl 3,3',4,4'-benzophenonetetracarboxylate 201356-56-1P 202481-65-0P 212840-07-8P, Dibutyl 3,3',4,4'-biphenylsulfonetetracarboxylate

212840-09-0P 212840-11-4P 212840-12-5P 212840-13-6P 212840-14-7P
212840-15-8P 212840-16-9P
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and reaction in preparing polyamic acids for **photoimaging compns.** for heat-resistant pattern formation)

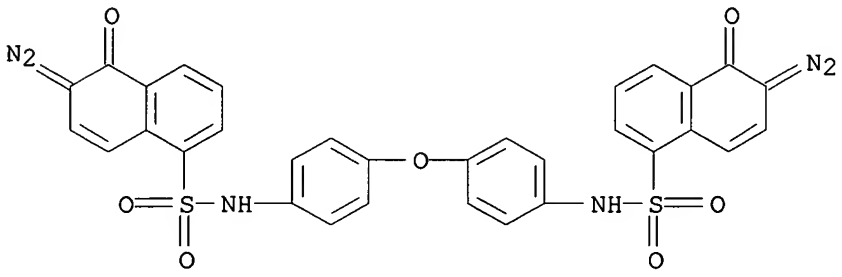
IT 212785-42-7P 212785-44-9P
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and reaction in preparation of polyimides for **photoimaging compns.** for heat-resistant pattern formation)

IT 202481-66-1P 212785-42-7DP, imidized 212785-43-8P 212785-44-9DP, imidized 212840-08-9P 212916-49-9P 212916-50-2P 212916-51-3P 212916-52-4P
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use in preparing **photoimaging compns.** for heat-resistant pattern formation)

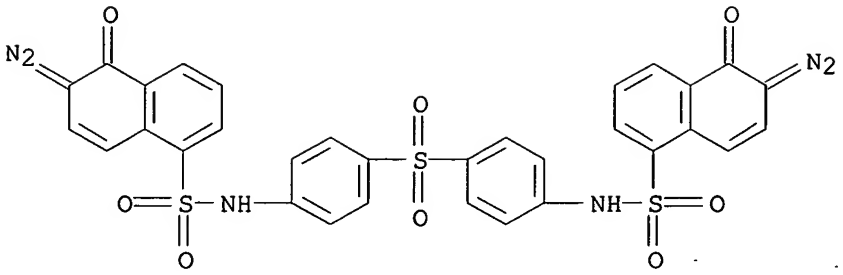
IT 71-36-3, 1-Butanol, reactions 80-08-0 89-32-7 101-80-4 109-73-9, Butylamine, reactions 535-87-5, 3,5-Diaminobenzoic acid 2421-28-5 2540-99-0 7545-50-8, Bis(3-amino-4-hydroxyphenyl)sulfone 7719-09-7, Thionyl chloride 83558-87-6
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(reaction in preparing polyamic acids for **photoimaging compns.** for heat-resistant pattern formation)

IT **125677-72-7 125677-73-8**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**photoimaging compns.** for heat-**resistant** pattern formation containing polyamic acids and)

RN 125677-72-7 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-(oxydi-4,1-phenylene)bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)



RN 125677-73-8 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-(sulfonyldi-4,1-phenylene)bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)



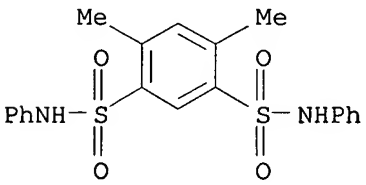
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 15 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:219655 HCAPLUS
DN 128:288346
TI IR-sensitive diazonaphthoquinone imaging **composition** and element
IN West, Paul Richard; Sheriff, Eugene Lynn; Gurney, Jeffery Allen; Schneebeli, Ralph Scott; Jordan, Thomas Robert; Miller, Gary Roger; Dominh, Thap
PA Eastman Kodak Co., USA
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 833204	A1	19980401	EP 1997-202899	19970922
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 5705322	A	19980106	US 1996-723176	19960930
	US 5705308	A	19980106	US 1996-723335	19960930
	US 5858626	A	19990112	US 1997-907607	19970808
	US 6117610	A	20000912	US 1997-907759	19970808
	WO 9908157	A2	19990218	WO 1998-US14741	19980723
	WO 9908157	A3	19990415		
	W: CA, CN, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1996-723176	A	19960930		
	US 1996-723335	A	19960930		
	US 1997-907607	A	19970808		
	US 1997-907759	A	19970808		

AB An IR-sensitive imaging **composition** contains two essential components, namely an IR-absorbing material, and a phenolic resin that is either mixed or reacted with an o-diazonaphthoquinone derivative The **composition** is suited for lithog. printing plate preparation using laser.
IC ICM G03F007-022
ICS G03F007-20
CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST IR **photoimaging compn** diazonaphthoquinone lithog plate
IT Carbon black, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(IR laser-sensitive imaging **compns**. for lithog. plate preparation

containing)
IT **Photoimaging** materials
(IR-sensitive; containing IR absorbers, phenolic resins, and diazonaphthoquinone derivs. for lithog. plate preparation)
IT Polyethers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(di-Me **siloxane**-; IR laser-sensitive imaging **compns** . for lithog. plate preparation containing)
IT **Polysiloxanes**, uses
Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(di-Me, polyether-; IR laser-sensitive imaging **compns**. for lithog. plate preparation containing)
IT Lithographic plates
(laser-sensitive imaging **compns**. containing IR absorbers, phenolic resins, and diazonaphthoquinone derivs. for preparation of)
IT Phenolic resins, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(laser-sensitive imaging **compns**. for lithog. plate preparation containing IR absorbers, diazonaphthoquinone derivs. and)
IT 9016-83-5, Formaldehyde-cresol copolymer 31001-73-7 53155-39-8 57248-94-9 60487-87-8 62655-78-1 80280-59-7 82030-45-3 103817-78-3 105365-62-6 106885-72-7 107101-55-3 129290-81-9 **143182-20-1** 144919-40-4 201871-16-1 201991-70-0 201991-72-2 202009-44-7, CG 21-1005 205744-92-9
RL: TEM (Technical or engineered material use); USES (Uses)
(IR laser-sensitive **imaging compns**. for lithog. plate preparation containing)
IT **143182-20-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(IR laser-sensitive **imaging compns**. for lithog. plate preparation containing)
RN 143182-20-1 HCAPLUS
CN 1,3-Benzenedisulfonamide, 4,6-dimethyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 16 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:47852 HCAPLUS
DN 128:174153
TI Positive image-forming composition useful in production of presensitized lithographic plate
IN Kawamura, Koichi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10010737	A2	19980116	JP 1996-164698	19960625
PRAI JP 1996-164698		19960625		

AB The title composition contains a compound generating an acid by the action of light or heat and a polymer having a structural unit LSO2NR2SO2R1 (R1 = aromatic group or alkyl; L = polyvalent organic group composed of nonmetal atoms and required to link the unit to the polymer skeleton; R2 = alkoxymethyl, arylmethyl, alicyclic alkyl). High quality presensitized lithog. plates are obtained from the composition without development after exposure and the composition shows high sensitivity toward light of ≥350 nm, and good storage stability.

IC ICM G03F007-039
ICS G03F007-00; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

IT **203007-78-7P** 203007-79-8P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(pos. **image**-forming composition containing polymer having sulfonimide group for presensitized lithog. plate)

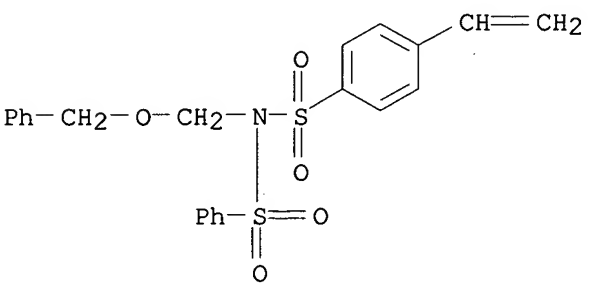
IT **203007-78-7P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(pos. **image**-forming composition containing polymer having sulfonimide group for presensitized lithog. plate)

RN 203007-78-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 4-ethenyl-N-[(phenylmethoxy)methyl]-N-(phenylsulfonyl)benzenesulfonamide (9CI) (CA INDEX NAME)

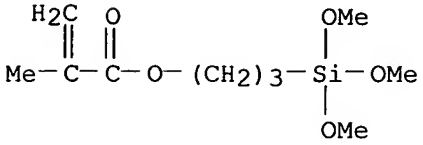
CM 1

CRN 203007-77-6
CMF C22 H21 N O5 S2



CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



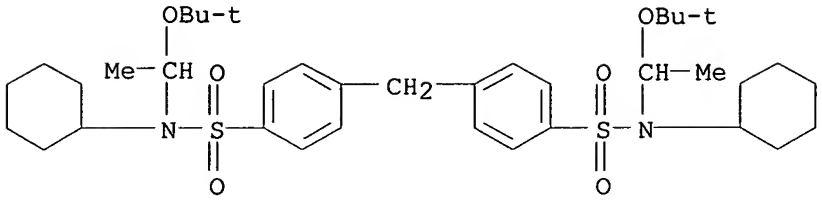
L45 ANSWER 17 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:21505 HCAPLUS
DN 128:121756
TI Positive image-forming **composition**
IN Kawamura, Koichi; Uenishi, Kazuya
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 49 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 814381	A1	19971229	EP 1997-110034	19970619
	EP 814381	B1	20010919		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 10010735	A2	19980116	JP 1996-160276	19960620
	JP 3601738	B2	20041215		
	JP 10039514	A2	19980213	JP 1996-190939	19960719
	JP 3601739	B2	20041215		
PRAI	JP 1996-160276	A	19960620		
	JP 1996-190939	A	19960719		

AB A pos. image-forming **composition** comprises (a) a compound generating an acid by the action of light or heat and (b) at least one compound selected from the N-sulfonylamide compds. represented by the formula L1(SO2NR2COR1)n or L1(CONR2SO2R1)n wherein n is an integer of from 1 to 6, R1 represents an aromatic group or an alkyl group, L1 represents an aromatic group or an alkyl group when n is 1 or L1 represents a polyvalent linkage group constituted of nonmetal atoms when n is from 2 to 6, and R2 represents a tertiary alkyl group, an alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl group or (c) a polymer having constitutional units represented by the formula -SO2NR3CO- wherein R3 represents a tertiary alkyl group, an alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl group.

IC ICM G03F007-004
ICS G03F007-039
CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST pos **photoimaging compn** lithog plate; sulfonylamide **photoacid** generator pos **photoimaging compn**; thermal acid generator pos **photoimaging compn**
IT Positive **photoresists**
(containing thermal or **photochem.** acid generators)
IT Integrated circuits
Lithographic plates
Semiconductor devices
(pos. **photoimaging compns.** containing thermal or **photochem.** acid generators for manufacture of)

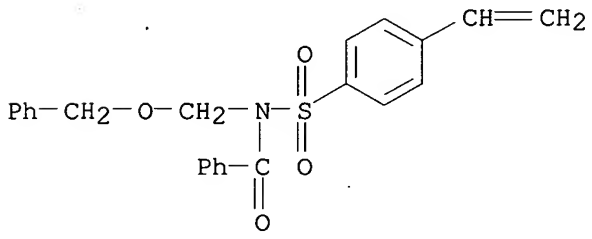
IT **Photoimaging** materials
(pos.; containing thermal or **photochem**. acid generators)
IT 201656-41-9 201656-43-1 201656-44-2 201656-45-3 201656-46-4 201656-47-5
RL: TEM (Technical or engineered material use); USES (Uses)
(**photochem**. acid generator for pos. **photoresists**)
IT 548-62-9, Crystal violet 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 68541-73-1 **201656-53-3** 201656-54-4 **201656-56-6** 201656-57-7 201656-59-9 201656-61-3 201656-63-5 **201656-65-7** 201656-67-9 201656-68-0
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoresists** containing)
IT 77-58-7 85-44-9, 1,3-Isobenzofurandione 95-57-8, o-Chlorophenol 22371-56-8, NK-3508 38686-70-3 69432-40-2 117283-53-1, Victoria Pure Blue BOH 1-naphthalenesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoresists** containing sulfonylamide **photoacid** generators and)
IT 201656-49-7P
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and reaction in preparing **photochem**. acid generator for pos. **photoresists**)
IT 153698-69-2P 201656-52-2P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use as dissoln. inhibitor for pos. **photoresists**)
IT 201656-40-8P 201656-42-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use as **photochem**. acid generator for pos. **photoresists**)
IT 24979-70-2DP, Poly(p-hydroxystyrene), reaction products with tert-Bu bromoacetate 125325-82-8P 129674-22-2P, p-tert-Butoxycarbonyloxystyrene-p-hydroxystyrene copolymer **201656-50-0P** 201656-51-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use in preparing pos. **photoresists**)
IT 76937-83-2, α,α,α',α',α'',α''-Hexakis(4-hydroxyphenyl)-1,3,5-triethylbenzene 110726-28-8, 1-[α-Methyl-α-(4'-hydroxyphenyl)ethyl]-4-[α',α'-bis(4''-hydroxyphenyl)ethyl]benzene
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(reaction in preparing dissoln. inhibitor for pos. **photoresists**)
IT 121-44-8, reactions 920-46-7, Methacrylic chloride **2849-81-2** 3587-60-8, Benzyl chloromethyl ether 201656-48-6
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(reaction in preparing **photochem**. acid generator for pos. **photoresists**)
IT **201656-53-3 201656-56-6 201656-65-7**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. **photoresists** containing)
RN 201656-53-3 HCAPLUS
CN Benzenesulfonamide, 4,4'-methylenebis[N-cyclohexyl-N-[1-(1,1-dimethylethoxy)ethyl]- (9CI) (CA INDEX NAME)



RN 201656-56-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with N-[(4-ethenylphenyl)sulfonyl]-N-[(phenylmethoxy)methyl]benzamide (9CI) (CA INDEX NAME)

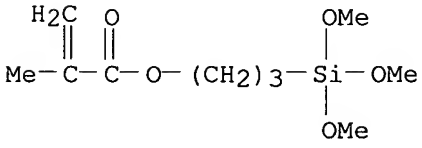
CM 1

CRN 201656-55-5
CMF C23 H21 N O4 S



CM 2

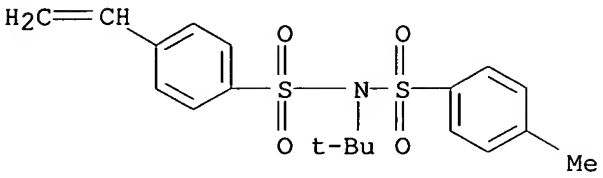
CRN 2530-85-0
CMF C10 H20 O5 Si



RN 201656-65-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with N-(1,1-dimethylethyl)-4-ethenyl-N-[(4-methylphenyl)sulfonyl]benzenesulfonamide and 2-propenenitrile (9CI) (CA INDEX NAME)

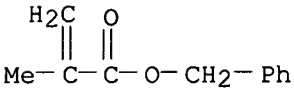
CM 1

CRN 201656-64-6
CMF C19 H23 N O4 S2



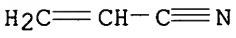
CM 2

CRN 2495-37-6
CMF C11 H12 O2



CM 3

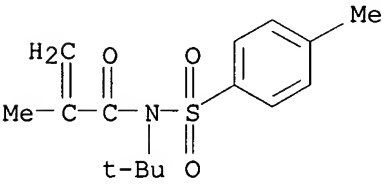
CRN 107-13-1
CMF C3 H3 N



IT **201656-50-0P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use in preparing pos. **photoresists**)
RN 201656-50-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with N-(1,1-dimethylethyl)-2-methyl-N-[(4-methylphenyl)sulfonyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

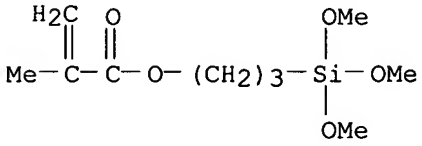
CRN 201656-49-7
CMF C15 H21 N O3 S



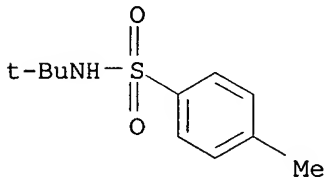
CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si



IT **2849-81-2**
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(reaction in preparing **photochem**. acid generator for pos. **photoresists**)
RN 2849-81-2 HCAPLUS
CN Benzenesulfonamide, N-(1,1-dimethylethyl)-4-methyl- (9CI) (CA INDEX NAME)



L45 ANSWER 18 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:672463 HCAPLUS
DN 125:312433
TI Positive-working **photoresist composition** with high-resolution for good profile
IN Suzuki, Nobuo; Yamanaka, Tsukasa; Aoso, Toshiaki; Kato, Eiichi
PA Fuji Photo Film Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 63 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08202038	A2	19960809	JP 1995-7759	19950120
PRAI JP 1995-7759		19950120		

AB The title **composition** comprises (1) a resin insol. in water but soluble in an aqueous alkaline solution, (2) a compound capable of generating an acid on being irradiated with an actinic ray or a radiation, (3) an acid dissociation-suppressing compound, and (4) block copolymer, wherein the acid dissociation-suppressing compound has a mol. weight ≤3,000, has acid-dissociable groups, and shows acid-caused increasing solubility in the alkaline solution The copolymer has a segment (A) based on ≥50% of a F- or Si-containing monomer and a segment (B) containing 0-20% of the F- or Si-containing monomer.
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and

Other Reprographic Processes)
ST pos working **photoresist compn**
IT Fluoropolymers
Siloxanes and **Silicones**, preparation
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, block and graft copolymers containing; prepared and contained in pos.-working **photoresist composition**)
IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(novolak, contained in pos.-working **photoresist compn**
.)
IT Resists
(**photo**-, pos.-working, containing acid dissociation-suppressing compound and block copolymer)
IT 52754-92-4 66003-78-9 124737-97-9 124738-06-3 153698-46-5
153698-67-0 176109-33-4 177786-96-8 177786-98-0
RL: TEM (Technical or engineered material use); USES (Uses)
(acid generating agent contained in pos.-working **photoresist composition**)
IT 24979-74-6, p-Hydroxystyrene-styrene copolymer 133685-94-6, o-Hydroxystyrene-p-hydroxystyrene copolymer 149642-75-1, p-Hydroxystyrene-4-vinylpyridine copolymer 171429-59-7, p-Acetoxy styrene-p-hydroxystyrene copolymer 178067-74-8
RL: TEM (Technical or engineered material use); USES (Uses)
(contained in pos.-working **photoresist composition**)
IT 4466-18-6 26505-28-2 27955-94-8 31171-18-3 51866-54-7 51866-62-7
76937-83-2 102826-48-2 110726-28-8 148452-55-5 148517-26-4
RL: TEM (Technical or engineered material use); USES (Uses)
(dissociation-suppressing compound contained in pos.-working **photoresist composition**)
IT 150551-83-0 150551-84-1 150551-85-2 150551-86-3 150551-87-4
150551-88-5 150551-90-9 150551-91-0 150551-92-1 150551-93-2
155293-25-7 183060-70-0
RL: CAT (Catalyst use); USES (Uses)
(initiator for preparation of star-type block copolymer for pos.-working **photoresist composition**)
IT 79-41-4DP, fluoroalkyl esters,graft copolymers with Me (meth)acrylates
80-62-6DP, graft copolymers with fluoroalkyl methacrylates and Me acrylate
96-33-3DP, Methyl acrylate, graft copolymers with fluoroalkyl methacrylates and Me methacrylate 144541-84-4P 150624-67-2P
150624-69-4P 150624-73-0P **150624-74-1P** 150625-09-5P
150652-03-2P 150737-10-3P **169046-25-7P**
183060-58-4P 183060-62-0P 183060-63-1P
183060-65-3P **183060-66-4P** 183060-67-5P
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prepared and contained in pos.-working **photoresist composition**)
IT 150624-68-3P 150624-77-4P, 2,2,3,4,4,4-Hexafluoro butyl methacrylate-methyl methacrylate graft copolymer 150625-00-6P
150625-01-7P **150625-03-9P 150625-07-3P**
150625-13-1P 150625-16-4P 150625-18-6P 150625-22-2P
150642-22-1P 150642-23-2P **150642-24-3P 172835-72-2P**
183060-60-8P 183060-61-9P
RL: PNU (Preparation, unclassified); PREP (Preparation)
(prepared for pos.-working **photoresist composition**)
IT **183060-68-6P**
RL: PNU (Preparation, unclassified); PREP (Preparation)

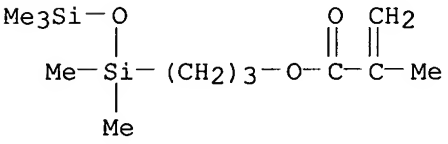
(star-type block copolymer prepared for pos.-working **photoresist composition**)

IT **150624-74-1P 150652-03-2P 169046-25-7P 183060-58-4P 183060-62-0P 183060-63-1P 183060-66-4P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prepared and contained in pos.-working **photoresist composition**)

RN 150624-74-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(pentamethyldisiloxanyl)propyl ester, polymer with ethyl 2-propenoate and methyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

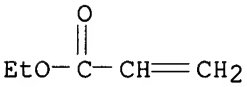
CM 1

CRN 18151-85-4
CMF C12 H26 O3 Si2



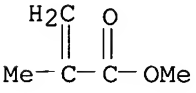
CM 2

CRN 140-88-5
CMF C5 H8 O2



CM 3

CRN 80-62-6
CMF C5 H8 O2

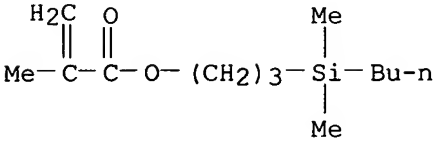


RN 150652-03-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(butyldimethylsilyl)propyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

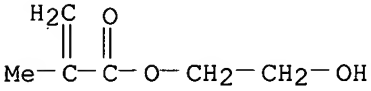
CRN 150652-02-1

CMF C13 H26 O2 Si



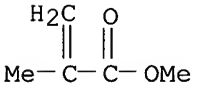
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

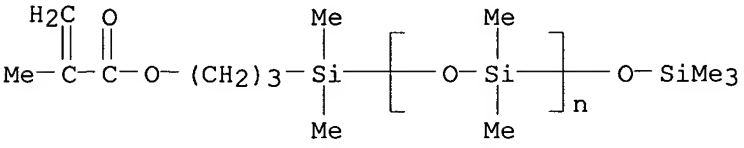
CRN 80-62-6
CMF C5 H8 O2



RN 169046-25-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with α-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-ω-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] (9CI) (CA INDEX NAME)

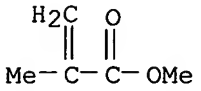
CM 1

CRN 123109-42-2
CMF (C2 H6 O Si)n C12 H26 O3 Si2
CCI PMS



CM 2

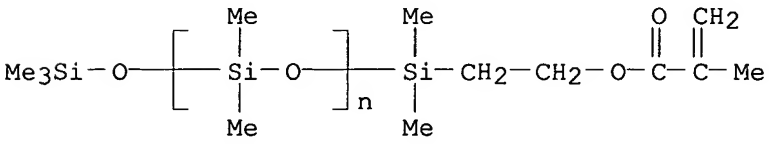
CRN 80-62-6
CMF C5 H8 O2



RN 183060-58-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-cyanoethyl ester, polymer with α-[dimethyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]silyl]-ω-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] and propyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

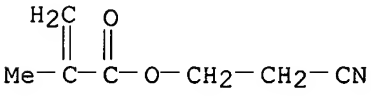
CM 1

CRN 176762-76-8
CMF (C2 H6 O Si)n C11 H24 O3 Si2
CCI PMS



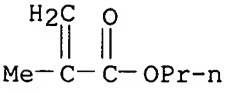
CM 2

CRN 4513-53-5
CMF C7 H9 N O2



CM 3

CRN 2210-28-8
CMF C7 H12 O2

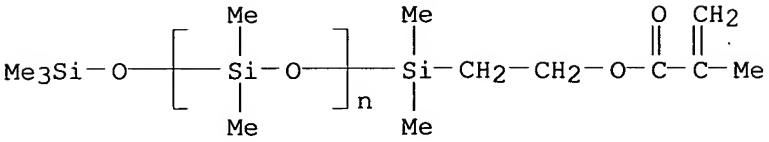


RN 183060-62-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2,3,3-tetrafluoropropyl ester, polymer with α-[dimethyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]silyl]-ω-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] and methyl 2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

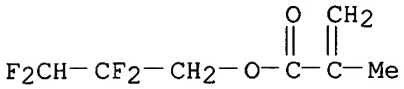
CRN 176762-76-8

CMF (C2 H6 O Si)n C11 H24 O3 Si2
CCI PMS



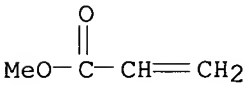
CM 2

CRN 45102-52-1
CMF C7 H8 F4 O2



CM 3

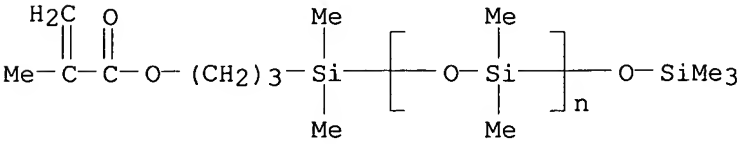
CRN 96-33-3
CMF C4 H6 O2



RN 183060-63-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with α-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-ω-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] and ethyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

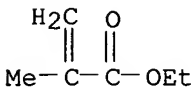
CRN 123109-42-2
CMF (C2 H6 O Si)n C12 H26 O3 Si2
CCI PMS



CM 2

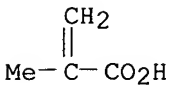
CRN 97-63-2

CMF C6 H10 O2



CM 3

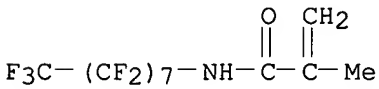
CRN 79-41-4
CMF C4 H6 O2



RN 183060-66-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N-(heptadecafluorooctyl)-2-methyl-2-propenamide, methyl 2-propenoate and 2-[(trimethylsilyl)oxy]ethyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

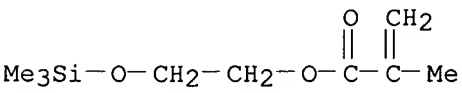
CM 1

CRN 150625-14-2
CMF C12 H6 F17 N O



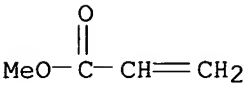
CM 2

CRN 17407-09-9
CMF C9 H18 O3 Si



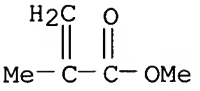
CM 3

CRN 96-33-3
CMF C4 H6 O2



CM 4

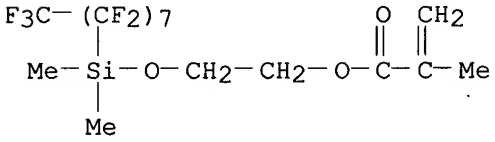
CRN 80-62-6
CMF C5 H8 O2



IT **150625-03-9P 150625-07-3P 150625-13-1P**
150642-24-3P 172835-72-2P
RL: PNU (Preparation, unclassified); PREP (Preparation)
(prepared for pos.-working **photoresist composition**)
RN 150625-03-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[(heptadecafluorooctyl)dimethylsilyl]oxy]ethyl ester, polymer with phenylmethyl 2-methyl-2-propenoate and 2-(phosphonooxy)ethyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

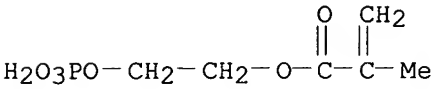
CM 1

CRN 150625-02-8
CMF C16 H15 F17 O3 Si



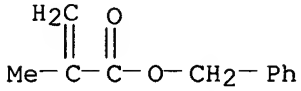
CM 2

CRN 24599-21-1
CMF C6 H11 O6 P



CM 3

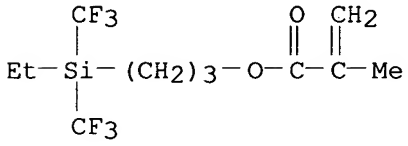
CRN 2495-37-6
CMF C11 H12 O2



RN 150625-07-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-[ethylbis(trifluoromethyl)silyl]propyl ester, polymer with ethyl 2-methyl-2-propenoate and 2,2,3,4,4,4-hexafluorobutyl 2-propenoate, graft (9CI) (CA INDEX NAME)

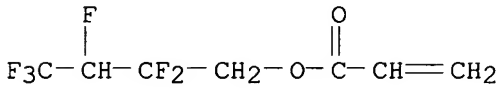
CM 1

CRN 150625-06-2
CMF C11 H16 F6 O2 Si



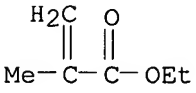
CM 2

CRN 54052-90-3
CMF C7 H6 F6 O2



CM 3

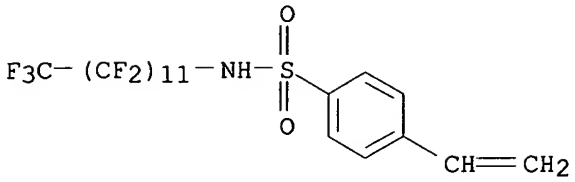
CRN 97-63-2
CMF C6 H10 O2



RN 150625-13-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 4-ethenyl-N-(pentacosafluorododecyl)benzenesulfonamide and methyl 2-propenoate, graft (9CI) (CA INDEX NAME)

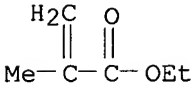
CM 1

CRN 150625-12-0
CMF C20 H8 F25 N O2 S



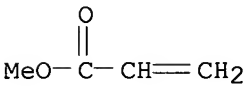
CM 2

CRN 97-63-2
CMF C6 H10 O2



CM 3

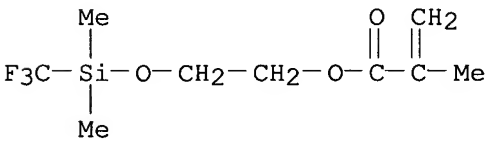
CRN 96-33-3
CMF C4 H6 O2



RN 150642-24-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 2-cyanoethyl 2-propenoate and 2-[[dimethyl(trifluoromethyl)silyl]oxy]ethyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

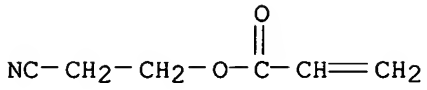
CM 1

CRN 150625-24-4
CMF C9 H15 F3 O3 Si



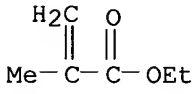
CM 2

CRN 106-71-8
CMF C6 H7 N O2



CM 3

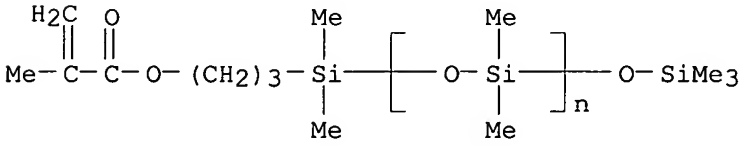
CRN 97-63-2
CMF C6 H10 O2



RN 172835-72-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with α-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-ω-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] and methyl 2-propenoate, block (9CI) (CA INDEX NAME)

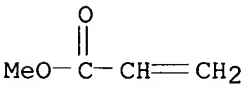
CM 1

CRN 123109-42-2
CMF (C2 H6 O Si)n C12 H26 O3 Si2
CCI PMS



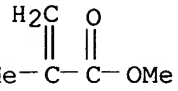
CM 2

CRN 96-33-3
CMF C4 H6 O2



CM 3

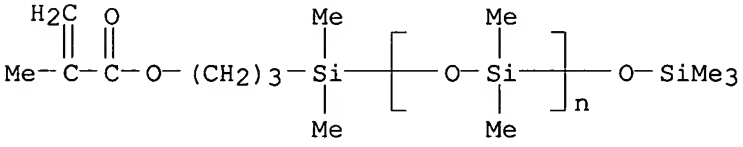
CRN 80-62-6
CMF C5 H8 O2



IT **183060-68-6P**
RL: PNU (Preparation, unclassified); PREP (Preparation)
(star-type block copolymer prepared for pos.-working **photoresist composition**)
RN 183060-68-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with α-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-ω-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)], methyl 2-propenoate and 2-propenoic acid, block (9CI) (CA INDEX NAME)

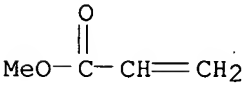
CM 1

CRN 123109-42-2
CMF (C2 H6 O Si)n C12 H26 O3 Si2
CCI PMS



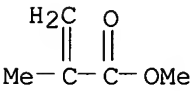
CM 2

CRN 96-33-3
CMF C4 H6 O2



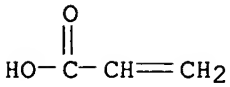
CM 3

CRN 80-62-6
CMF C5 H8 O2



CM 4

CRN 79-10-7
CMF C3 H4 O2



L45 ANSWER 19 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:593445 HCAPLUS
DN 126:12970
TI New **silicon**-containing high-temperature resist **compositions**
AU Rudaya, L. I.; Klimova, N. V.; Bogolyubova, S. S.; Khromenkov, O. V.; Lebedeva, G. K.; Smirnova, G. S.; El'tsov, A. V.
CS Sankt-Peterburgskii Tekhnologicheskii Institut, St. Petersburg, Russia
SO Zhurnal Prikladnoi Khimii (Sankt-Peterburg) (1996), 69(5), 812-818
CODEN: ZPKHAB; ISSN: 0044-4618
PB Nauka
DT Journal
LA Russian
AB New Si-containing poly(o-hydroxyamides) and Si-containing 2,1-diazonaphthalenones were synthesized. **Photosensitive compns.** with high temperature resistance were prepared which contained aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of 2,1-naphthalenone and various acid **photogenerators.** The Si-C bond cleavage by **photogenerated** acids in the Si-containing poly(o-hydroxyamides) competes with acid-catalyzed polycyclization to polybenzoxazole what does not provide sufficient differentiation in the solubility of the film areas during image reversal.
CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 29, 35
ST **silicon** contg **photoimaging photoresist compn**; polyamide **silicon** contg **photoimaging**; sulfoester diazonaphthalenone **silicon** contg **photoresist**
IT **Photoimaging** materials
Photolysis
Photoresists
(**photoimaging composition** containing aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)
IT Polyamides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoimaging composition** containing aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)
IT Polyethers, uses
Polyethers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyamide-; **photoimaging composition** containing aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)
IT Polyamides, uses
Polyamides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyether-; **photoimaging composition** containing aromatic and

Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)

IT Polyamides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**silicon**-containing; **photoimaging composition** containing aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)

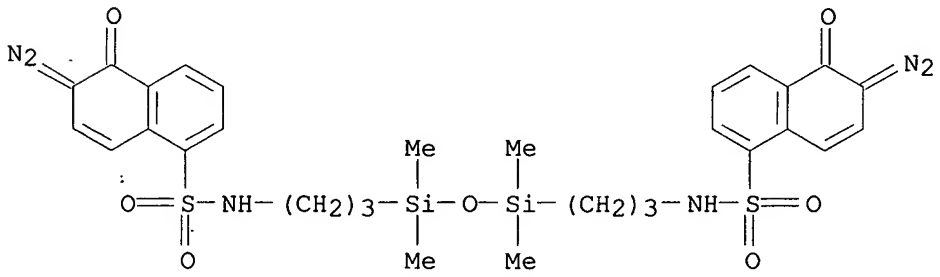
IT 36451-09-9, 1,2-Naphthoquinonediazido-4-sulfonyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation with **siloxanediols**)

IT 184095-14-5P 184095-15-6P
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(**photoimaging composition** containing aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)

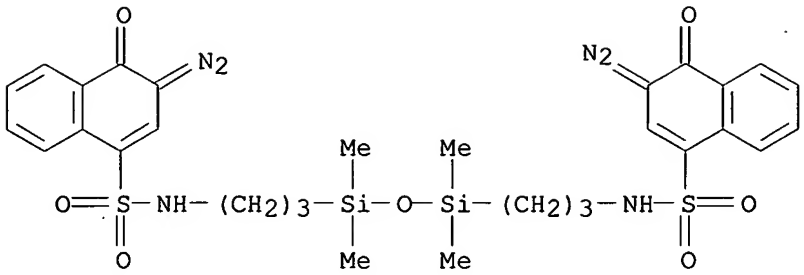
IT 198-55-0, Perylene 6542-67-2, 2,4,6-Tris(trichloromethyl)-1,3,5-triazine 42170-10-5 52258-93-2 **141922-02-3 169828-39-1** 184095-18-9
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoimaging composition** containing aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)

IT **141922-02-3 169828-39-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoimaging composition** containing aromatic and Si-containing poly(o-hydroxyamides) and Si-containing sulfoesters of diazonaphthalenone for application as high-temperature **photoresists**)

RN 141922-02-3 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-3,1-propanediyl]bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)



RN 169828-39-1 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-3,1-propanediyl]bis[3-diazo-3,4-dihydro-4-oxo- (9CI) (CA INDEX NAME)

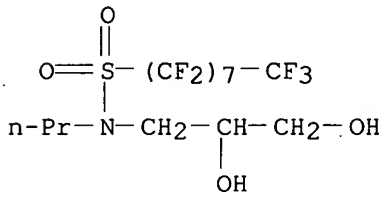


L45 ANSWER 20 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:951769 HCAPLUS
DN 124:131533
TI Positive-working **photoresist compositions**
IN Kato, Tetsuya; Koshama, Atsushi; Doi, Kosuke; Takahashi, Koichi; Obara, Hidekatsu; Nakayama, Toshimasa; Yamamoto, Hirotaka; Akutsu, Ikuo; Tokutake, Nobuo
PA Tokyo Ohka Kogyo Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

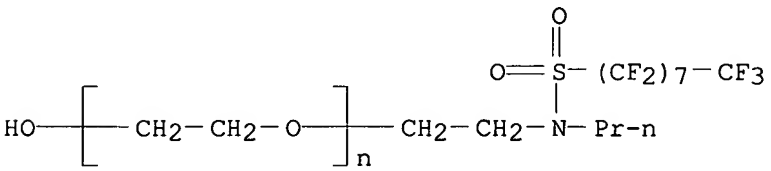
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07230165	A2	19950829	JP 1994-144437	19940627
	JP 3112229	B2	20001127		
PRAI	JP 1993-160799	A	19930630		
	JP 1993-325478	A	19931222		

OS MARPAT 124:131533
AB The **compns**. contain (A) alkali-soluble resins, (B) quinonediazide-containing compds., and (C) RfSO2NR1R2 [Rf = (partially) substituted C6-10 fluoroalkyl; R1 = H, C1-5 alkyl; R2 = ≥2 OH-containing C2-5 alkyl, (CH2CH2O)nR3; R3 = H, benzoyl; CH2CO2R4; R4 = C1-5 alkyl; n = 1-10], Rg(CH2)mOCH2CH2(OH)CH2OH (Rg = C4-20 perfluoroalkyl; m = 1, 2), or perfluoroalkyl-containing **siloxane**- and polyoxyethylene polyether-containing nonionic **fluoroorganosiloxanes** dissolved in mixed solvents containing 60-90% alkyl 2-oxypropionates (AOP) and 10-40% alkyl acetates or 50-90% AOP and 10-50% propylene glycol monoalkyl ether acetates (PGA) or PGA.
IC ICM G03F007-022
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST **photoresist** quinonediazide nonionic fluoride; alkali sol resin **photoresist**; **organosiloxane** pos **photo** resist solvent
IT **Siloxanes** and **Silicones**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fluoro, X 70-092; pos.-working **photoresists** containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)
IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(novolak, cresol-based, pos.-working **photo** resists containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)

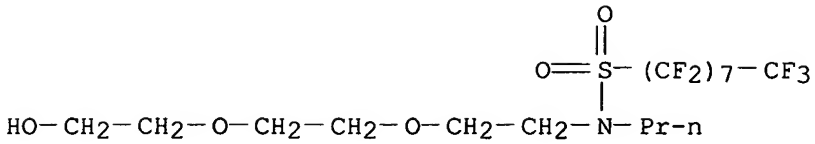
IT Resists
(**photo**-, pos.-working **photo** resists containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)
IT **2262-49-9**, MF 110 **52550-45-5**, Eftop EF 122B
94765-69-2, Eftop EF 126 **146670-61-3**, Eftop EF 122C
173080-46-1, EF 127
RL: TEM (Technical or engineered material use); USES (Uses)
(nonionic fluoro compound; pos.-working **photoresists** containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)
IT 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working **photoresists** containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)
IT 97-64-3 123-86-4, Butyl acetate 84540-57-8, Propylene glycol monomethyl ether acetate
RL: NUU (Other use, unclassified); USES (Uses)
(pos.-working **photoresists** containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)
IT 31127-54-5, 2,3,4,4'-Tetrahydroxybenzophenone 38638-43-6, Naphthoquinone-1,2-diazide-5-sulfonylchloride 126814-93-5, MF 100
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresists** containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)
IT **2262-49-9**, MF 110 **52550-45-5**, Eftop EF 122B
146670-61-3, Eftop EF 122C
RL: TEM (Technical or engineered material use); USES (Uses)
(nonionic fluoro compound; pos.-working **photoresists** containing quinonediazide compds., alkali-soluble resins, and nonionic fluorides)
RN 2262-49-9 HCAPLUS
CN 1-Octanesulfonamide, N-(2,3-dihydroxypropyl)-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-propyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 52550-45-5 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-[2-[[(heptadecafluorooctyl)sulfonyl]propylamino]ethyl]-ω-hydroxy- (9CI) (CA INDEX NAME)



RN 146670-61-3 HCAPLUS
CN 1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[2-[2-(2-hydroxyethoxy)ethoxy]ethyl]-N-propyl- (9CI) (CA INDEX NAME)

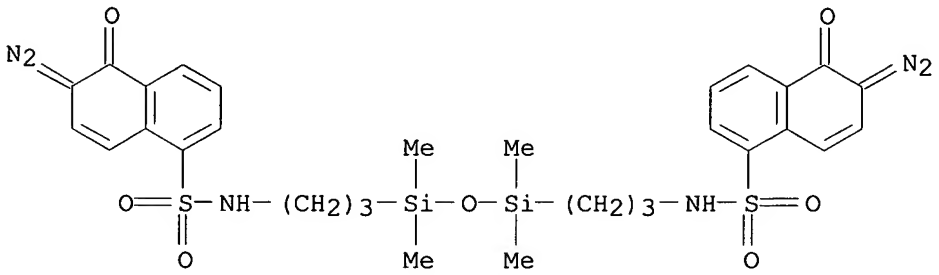


L45 ANSWER 21 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:730969 HCAPLUS
DN 123:301302
TI **Silicon**-containing naphthoquinodiazides as light-sensitive components of resist **composition** with increased adhesion
AU Rudaya, L. I.; Bogolyubova, S. S.; Klimova, N. V.
CS St. Peterburg. Tekhnol. Inst., Russia
SO Zhurnal Prikladnoi Khimii (Sankt-Peterburg) (1995), 68(1), 110-13
CODEN: ZPKHAB; ISSN: 0044-4618
PB Nauka
DT Journal
LA Russian
AB Poly(o-hydroxyamide)-based **photoresist** containing as **photosensitive** component a condensation product of naphthoquinonediazidosulfonyl chloride with bis(dimethylaminopropyl) **siloxane** show excellent adhesion to the SiO2/Si and Si3N4 substrates. The relief images obtained with this **photoresist** (after thermocyclization at 350° for 30 min.) show thermal stability up to 460°.
CC 74-2 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST **photoresist photosensitive** component naphthoquinonediazidosulfonyl **siloxane**
IT Polyamides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist** containing naphthoquinonediazidosulfonyl **siloxane** as **photosensitive** component for increased adhesion to support)
IT Resists
(**photo-**, **photoresist** from poly(o-hydroxyamide) and naphthoquinonediazidosulfonyl **siloxane** as **photosensitive** component for increased adhesion)
IT 3770-97-6 36451-09-9, 1,2-Naphthoquinonediazido-4-sulfonyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation with bis(dimethylaminopropyl)**siloxane**)
IT **141922-02-3P 169828-39-1P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresist** from poly(o-hydroxyamide) and naphthoquinonediazidosulfonyl **siloxane** as **photosensitive** component for increased adhesion)
IT 7440-21-3, **Silicon**, uses 7631-86-9, **Silicon** dioxide, uses 12033-89-5, **Silicon** nitride, uses
RL: NUU (Other use, unclassified); USES (Uses)
(support; **photoresist** containing naphthoquinonediazidosulfonyl **siloxane** as **photosensitive** component for increased adhesion to support)
IT 42170-10-5 52258-93-2
RL: TEM (Technical or engineered material use); USES (Uses)

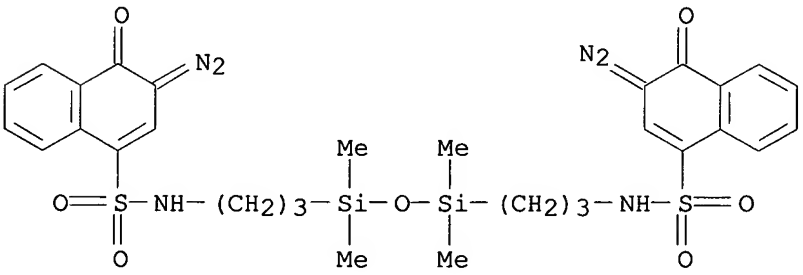
(support; **photoresist** containing naphthoquinonediazidosulfonyl **siloxane** as **photosensitive** component for increased adhesion to support)

IT **141922-02-3P 169828-39-1P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoresist** from poly(o-hydroxyamide) and naphthoquinonediazidosulfonyl **siloxane** as **photosensitive** component for increased adhesion)

RN 141922-02-3 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-3,1-propanediyl]bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)



RN 169828-39-1 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-3,1-propanediyl]bis[3-diazo-3,4-dihydro-4-oxo- (9CI) (CA INDEX NAME)



L45 ANSWER 22 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:268283 HCAPLUS
DN 123:21950
TI Method for enhancing image-density
AU Anon.
CS UK
SO Research Disclosure (1994), 367, 651-4 (No. 36733)
CODEN: RSDSBB; ISSN: 0374-4353
DT Journal; Patent
LA English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI RD 367033		19941110		

PRAI RD 1994-367033 19941110
AB The present disclosure provides a method for enhancing image d. in a

substantially light-insensitive thermog. recording material or **photothermog**. recording material. This can be accomplished in three different ways. The first example is a direct thermal recording material with a thermosensitive recording layer containing silver behenate, polyvinylbutyral, and reducing agents. A thermal printhead was used to print test patterns on this thermosensitive recording material. After printing, the recording material was exposed to IR radiation as post-treatment. Selective enhancement of the originally formed optical d. by the IR post-exposure was observed The IR post-exposure makes it possible to reduce the writing energy necessary for obtaining certain optical d. The second example is a **photothermog. composition** containing silver halide emulsion, silver behenate, polyvinylbutyral, reducing agent, stabilizer, and a spectral sensitizer. After imagewise exposure, this light sensitive recording material was thermally developed and then post-treated with IR exposure. IR post-treatment enhanced the maximum optical d. obtained. The third example is a thermog. recording material containing silver behenate, polyvinylbutyral, reducing agent, and an IR absorbing dye. This material can be applied either to an electrophotog. receptor or to a receptor layer of ink-jet printing.

CC 74-7 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

IT **Siloxanes** and **Silicones**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(IR post-exposure for enhancing image d. in thermog. recording)

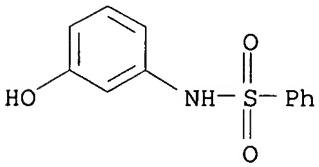
IT **Photographic** sensitizers
(spectral, IR post-exposure for enhancing image d. in thermog. recording)

IT 77-08-7 3943-89-3, 3,4-Dihydroxybenzoic acid ethyl ester
59149-19-8, Benzenesulfonamide, N-(3-hydroxyphenyl)-
RL: TEM (Technical or engineered material use); USES (Uses)
(reducing agent; IR post-exposure for enhancing **image** d. in thermog. recording)

IT **59149-19-8**, Benzenesulfonamide, N-(3-hydroxyphenyl)-
RL: TEM (Technical or engineered material use); USES (Uses)
(reducing agent; IR post-exposure for enhancing **image** d. in thermog. recording)

RN 59149-19-8 HCAPLUS

CN Benzenesulfonamide, N-(3-hydroxyphenyl)- (9CI) (CA INDEX NAME)



L45 ANSWER 23 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:226827 HCAPLUS

DN 122:20529

TI Positive-type **photosensitive compositions**

IN Aoso, Toshiaki; Mizutani, Kazuyoshi

PA Fuji Photo Film Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 83 pp.
CODEN: JKXXAF

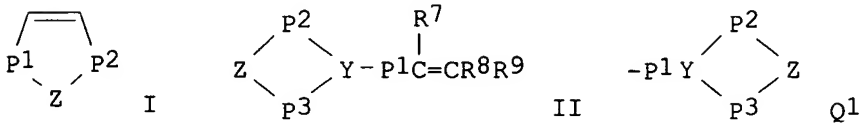
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06011838	A2	19940121	JP 1991-12665	19910111
PRAI	JP 1991-12665		19910111		

GI



I II Q1

AB The aqueous alkali-developable title **compns**. for lithog. plates, resists, etc., with good O plasma resistance comprise **polysiloxanes** containing ≥1 mol% **siloxane** units formed by thermal cycloaddn. reaction of R1R2C:CR3C(SiX1X2X3):CR4R5, R1R2C:CR3CR4:CR5SiX1X2X3, R1R2C:CR3C(SiR6X1X2):CR4R5, or R1R2C:CR3CR4:CR5SiR6X1X2 with QP1CR7:CR8R9, I, II, or QP1C.tp1bond.CR9, (B) compds. having ≥1 acid-decomposable group and showing increased solubility in the alkali developer by acid, and (C) compds. producing acid upon light or radiation irradiation In the formulas, R1-5 = H, (un)substituted alkyl, aryl, silyl, siloxy; R6 = H, (un)substituted alkyl, aryl, R1R2C:CR3C:CR4R5, R1R2C:CR3CR4:CR5; R7-9 = H, (un)substituted alkyl, aryl, alkoxy, cyano, nitro, -P1Q, Q1, optionally containing O, CO, CO2, O2C, CONR10, NR10CO, SO2, SO3; R10 = H, (un)substituted alkyl, aryl; R7R8 or R7P1 may be ring member; X1-3 = hydroxy or hydrolyzable group; P1-3 = direct bond, (un)substituted alkylene, arylene, O, CO, CO2, O2C, CONR10, NR10CO, SO2, SO3; Y = trivalent aromatic group; Q = acid group of pKa below 12; Z1 = C(R7)(P1Q), CONHCO, CON(OH)CO, CON(P1Q)CO, =Yn+2(P1Q)n; Yn+2 = (n + 2)-valent aromatic group; n = 1-3.

IC ICM G03F007-075
ICS G03F007-004; G03F007-039; H01L021-027

CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST **silsesquioxane photoresist** alkali developable; lithog plate **silsesquioxane** alkali developable

IT **Silsesquioxanes**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresists** and lithog. plates)

IT Lithographic plates
(**silsesquioxane**-based)

IT Resists
(**photo-, silsesquioxane**-based)

IT **74508-34-2**, 4-Trimethylsilyloxystyrene homopolymer 87261-04-9, Poly(4-tert-butoxycarbonyloxystyrene)
RL: TEM (Technical or engineered material use); USES (Uses)
(in **silsesquioxanes** for **photoresists** and lithog. plates)

IT 541-59-3DP, Maleimide, reaction products with (trimethoxysilyl)butadiene-phenyltriethoxysilane **silsesquioxane**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture for **photoresist** and lithog. plates)

IT 142-45-0DP, Acetylenedicarboxylic acid, reaction products with (trimethoxysilyl)butadiene-tolyltrimethoxysilane **silsesquioxane** 2210-24-4DP, N-Phenylacrylamide, reaction products with **silsesquioxanes** 21282-96-2DP, reaction products with **silsesquioxanes** **131290-90-9DP**, reaction products with **silsesquioxanes** **159440-41-2DP**, reaction products with acetylenedicarboxylic acid **159448-33-6DP**, reaction products with maleimide **159448-34-7DP**, reaction products with (toluenesulfonyl)acrylamide
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture for **photoresists** and lithog. plates)

IT **159519-43-4P** **159519-44-5P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-type **photoresists**)

IT **104955-47-7**, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer **159474-63-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with maleimide derivs.)

IT 7300-91-6, N-(p-Hydroxyphenyl)maleimide 7300-97-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with **silsesquioxanes**)

IT 69432-40-2P 91222-48-9P 141425-69-6P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(**silsesquioxane** pos.-type **photoresists** containing)

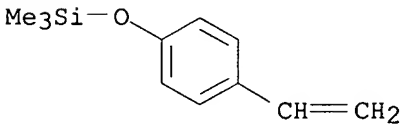
IT 23928-87-2 74227-35-3 75482-18-7
RL: MOA (Modifier or additive use); USES (Uses)
(**silsesquioxane** pos.-type **photoresists** containing)

IT **74508-34-2**, 4-Trimethylsilyloxystyrene homopolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(in **silsesquioxanes** for **photoresists** and lithog. plates)

RN 74508-34-2 HCAPLUS
CN Silane, (4-ethenylphenoxy)trimethyl-, homopolymer (9CI) (CA INDEX NAME)

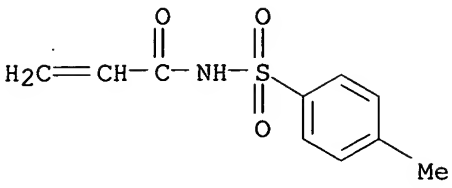
CM 1

CRN 58555-66-1
CMF C11 H16 O Si



IT **131290-90-9DP**, reaction products with **silsesquioxanes**
159440-41-2DP, reaction products with acetylenedicarboxylic acid
159448-33-6DP, reaction products with maleimide
159448-34-7DP, reaction products with (toluenesulfonyl)acrylamide
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture for **photoresists** and lithog. plates)

RN 131290-90-9 HCAPLUS
CN 2-Propenamide, N-[(4-methylphenyl)sulfonyl]- (9CI) (CA INDEX NAME)

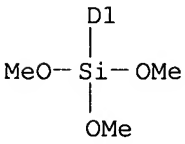


RN 159440-41-2 HCAPLUS
CN Silane, trimethoxy(1-methylene-2-propenyl)-, polymer with trimethoxy(methylphenyl)silane (9CI) (CA INDEX NAME)

CM 1

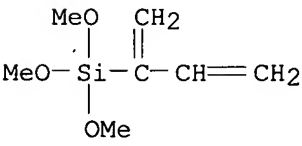
CRN 138746-39-1
CMF C10 H16 O3 Si
CCI IDS

D1—Me



CM 2

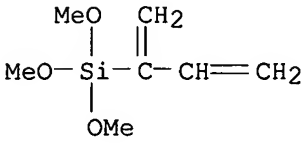
CRN 93830-52-5
CMF C7 H14 O3 Si



RN 159448-33-6 HCAPLUS
CN Silane, triethoxyphenyl-, polymer with trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

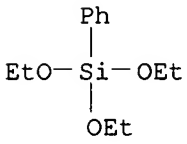
CM 1

CRN 93830-52-5
CMF C7 H14 O3 Si



CM 2

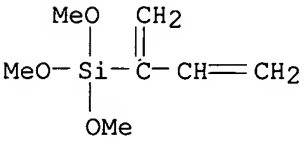
CRN 780-69-8
CMF C12 H20 O3 Si



RN 159448-34-7 HCAPLUS
CN Silane, (4-chlorophenyl)trimethoxy-, polymer with trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

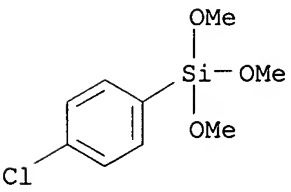
CM 1

CRN 93830-52-5
CMF C7 H14 O3 Si



CM 2

CRN 35692-30-9
CMF C9 H13 Cl O3 Si



IT **159519-43-4P 159519-44-5P**

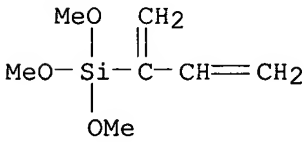
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-type **photoresists**)
RN 159519-43-4 HCAPLUS
CN Poly[[1,3-bis[2,3,3a,4,7,7a-hexahydro-2-(hydroxyphenyl)-1,3-dioxo-1H-isoindol-4-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 159519-44-5 HCAPLUS
CN Poly[[1,3-bis[2-[(aminosulfonyl)phenyl]-2,3,3a,4,7,7a-hexahydro-1,3-dioxo-1H-isoindol-5-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

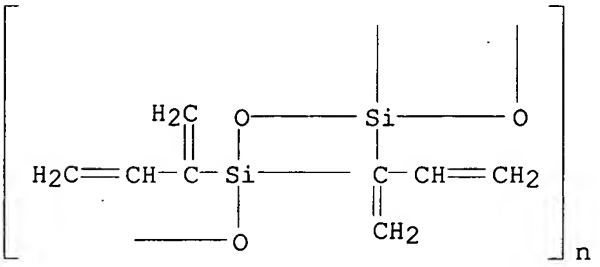
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **104955-47-7**, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer
159474-63-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with maleimide derivs.)
RN 104955-47-7 HCAPLUS
CN Silane, trimethoxy(1-methylene-2-propenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 93830-52-5
CMF C7 H14 O3 Si



RN 159474-63-2 HCAPLUS
CN Poly[[1,3-bis(1-methylene-2-propenyl)-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

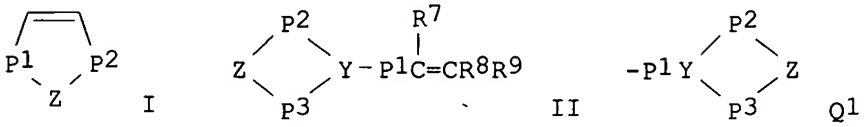


L45 ANSWER 24 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:226826 HCAPLUS
DN 122:20528
TI Positive-type **photosensitive compositions**
IN Aoso, Toshiaki; Mizutani, Kazuyoshi
PA Fuji Photo Film Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 63 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06011837	A2	19940121	JP 1991-12521	19910111
PRAI JP 1991-12521		19910111		

GI



AB The aqueous alkali-developable title **compns.** for lithog. plates, resists, etc., with good O plasma resistance comprise **polysiloxanes** containing ≥1 mol% **siloxane** units formed by thermal cycloaddn. reaction of R1R2C:CR3C(SiX1X2X3):CR4R5, R1R2C:CR3CR4:CR5SiX1X2X3, R1R2C:CR3C(SiR6X1X2):CR4R5, or R1R2C:CR3CR4:CR5SiR6X1X2 with QP1CR7:CR8R9, I, II, or QP1C.tp1bond.CR9 and (B) 2-nitrobenzyl esters or sulfonate compds. or 2- or 3-alkoxybenzyl esters or sulfonate compds. In the formulas, R1-5 = H, (un)substituted alkyl, aryl, silyl, siloxy; R6 = H, (un)substituted alkyl, aryl, R1R2C:CR3C:CR4R5, R1R2C:CR3CR4:CR5; R7-9 = H, (un)substituted alkyl, aryl, alkoxy, cyano, nitro, -P1Q, Q1, optionally containing O, CO, CO2, O2C, CONR10, NR10CO, SO2, SO3; R10 = H, (un)substituted alkyl, aryl; R7R8 or R7P1 may be ring member; X1-3 = hydroxy or hydrolyzable group; P1-3 = direct bond, (un)substituted alkylene, arylene, O, CO, CO2, O2C, CONR10, NR10CO, SO2, SO3; Y = trivalent aromatic group; Q = acid group of pKa below 12; Z1 = C(R7)(P1Q), CONHCO, CON(OH)CO, CON(P1Q)CO, =Yn+2(P1Q)n; Yn+2 = (n + 2)-valent aromatic group; n = 1-3.

IC ICM G03F007-075
ICS G03F007-004; G03F007-039; H01L021-027
CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST **silsesquioxane photoresist** nitrobenzyl ester; alkoxybenzyl ester **silsesquioxane photoresist**; lithog plate **silsesquioxane**

IT **Silsesquioxanes**
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresists** and lithog. plates)

IT Lithographic plates
(**silsesquioxane**-based)

IT Resists
(**photo-, silsesquioxane**-based)

IT 146227-70-5P 159448-35-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(in **silsesquioxane**-based **photoresists** and lithog. plates)

IT 541-59-3DP, Maleimide, reaction products with (trimethoxysilyl)butadiene-phenyltriethoxysilane **silsesquioxane**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
(manufacture for **photoresist** and lithog. plates)

IT 142-45-0DP, Acetylenedicarboxylic acid, reaction products with (trimethoxysilyl)butadiene-tolyltrimethoxysilane **silsesquioxane** 2210-24-4DP, N-Phenylacrylamide, reaction products with **silsesquioxanes** 21282-96-2DP, reaction products with **silsesquioxanes** **131290-90-9DP**, reaction products with **silsesquioxanes** **159440-41-2DP**, reaction products with acetylenedicarboxylic acid **159448-33-6DP**, reaction products with maleimide **159448-34-7DP**, reaction products with (toluenesulfonyl)acrylamide
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture for **photoresists** and lithog. plates)

IT **159519-43-4P** **159519-44-5P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-type **photoresists**)

IT **104955-47-7**, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer **159474-63-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with maleimide derivs.)

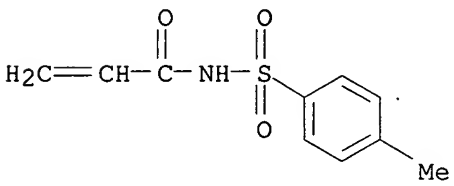
IT 7300-91-6, N-(p-Hydroxyphenyl)maleimide 7300-97-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with **silsesquioxanes**)

IT 145706-02-1P 145706-03-2P 159448-32-5P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(**silsesquioxane** pos.-type **photoresists** containing)

IT 80500-54-5 145706-09-8 159448-36-9 159448-37-0
RL: MOA (Modifier or additive use); USES (Uses)
(**silsesquioxane** pos.-type **photoresists** containing)

IT **131290-90-9DP**, reaction products with **silsesquioxanes** **159440-41-2DP**, reaction products with acetylenedicarboxylic acid **159448-33-6DP**, reaction products with maleimide **159448-34-7DP**, reaction products with (toluenesulfonyl)acrylamide
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture for **photoresists** and lithog. plates)

RN 131290-90-9 HCAPLUS
CN 2-Propenamide, N-[(4-methylphenyl)sulfonyl]- (9CI) (CA INDEX NAME)



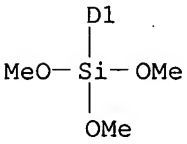
RN 159440-41-2 HCAPLUS
CN Silane, trimethoxy(1-methylene-2-propenyl)-, polymer with trimethoxy(methylphenyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 138746-39-1

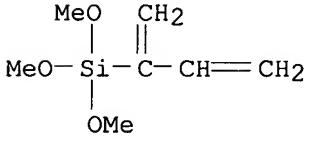
CMF C10 H16 O3 Si
CCI IDS

D1—Me



CM 2

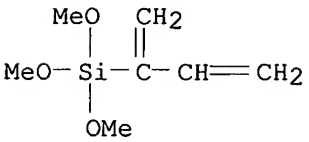
CRN 93830-52-5
CMF C7 H14 O3 Si



RN 159448-33-6 HCAPLUS
CN Silane, triethoxyphenyl-, polymer with trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

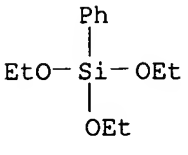
CM 1

CRN 93830-52-5
CMF C7 H14 O3 Si



CM 2

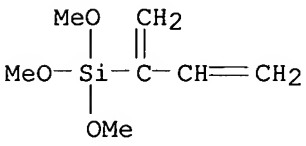
CRN 780-69-8
CMF C12 H20 O3 Si



RN 159448-34-7 HCAPLUS
CN Silane, (4-chlorophenyl)trimethoxy-, polymer with trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

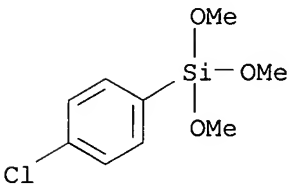
CM 1

CRN 93830-52-5
CMF C7 H14 O3 Si



CM 2

CRN 35692-30-9
CMF C9 H13 Cl O3 Si



IT **159519-43-4P 159519-44-5P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-type **photoresists**)
RN 159519-43-4 HCAPLUS
CN Poly[[1,3-bis[2,3,3a,4,7,7a-hexahydro-2-(hydroxyphenyl)-1,3-dioxo-1H-isoindol-4-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

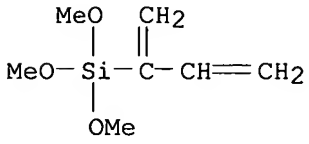
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 159519-44-5 HCAPLUS
CN Poly[[1,3-bis[2-[(aminosulfonyl)phenyl]-2,3,3a,4,7,7a-hexahydro-1,3-dioxo-1H-isoindol-5-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **104955-47-7**, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer
159474-63-2
RL: RCT (Reactant); RACT (Reactant or reagent)

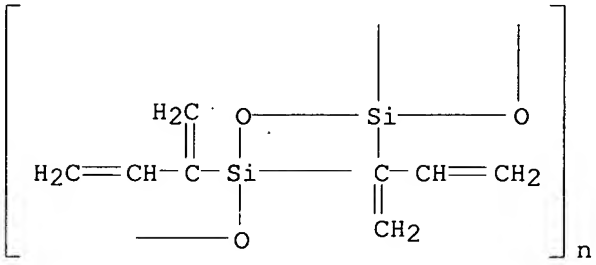
(reaction with maleimide derivs.)
RN 104955-47-7 HCAPLUS
CN Silane, trimethoxy(1-methylene-2-propenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 93830-52-5
CMF C7 H14 O3 Si



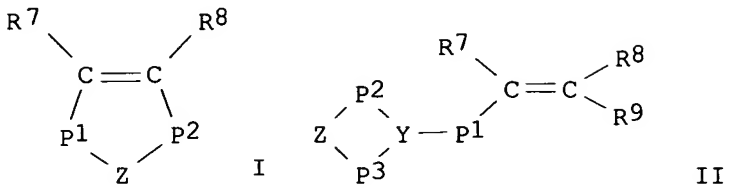
RN 159474-63-2 HCAPLUS
CN Poly[[1,3-bis(1-methylene-2-propenyl)-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



L45 ANSWER 25 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:144624 HCAPLUS
DN 122:20500
TI positive-working **photoresist composition**
IN Aoso, Toshiaki; Mizutani, Kazuyoshi
PA Fuji Photo Film Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 45 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06027670	A2	19940204	JP 1991-12540	19910111
PRAI JP 1991-12540		19910111		

GI



I II

AB The title **photoresist composition** contains (1) a **polysiloxane** compound containing ≥1 mol% **siloxane** unit obtained by cyclic thermal addition reaction of R1R2C=CR3C(SiX1X2X3)=CR4R5, R1R2C=CR3CR4=CR5(SiX1X2X3), etc. with R7C(QP1)=CR8R9, I, II, QP1C.tplbond.CR9 [R1-5 = H, alkyl, aryl, silyl, siloxy; R7-9 = H, alkyl, alkoxy, aryl, CN, NO2, -P1Q, etc.; R7 and R8, or R7 and P1 may form a ring; X1-3 = OH, hydrolyzable group; P1-3 = single bond, alkylene, arylene; Y = trivalent aromatic group; Q = acid group of pKa ≤12; Z], and (2) a α-diazoketone compound or 2-diazo-1,3-diketone compound Fine resist patterns can be obtained with this **composition**

IC ICM G03F007-075
ICS C08L083-04; G03F003-10; G03F007-00; G03F007-038; G03F007-16; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST pos working **photoresist compn silsesquioxane**

IT **Silsesquioxanes**
RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist composition** from)

IT Resists
(**photo-**, **composition**, pos.-working, from **silsesquioxane** and diazoketone compound)

IT **158828-98-9 158829-00-6 158829-03-9 159438-75-2 159438-77-4 159519-41-2 159519-42-3**
RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(ladder, pos.-working **photoresist composition** from)

IT 123153-97-9 125009-92-9
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ladder, pos.-working **photoresist composition** from)

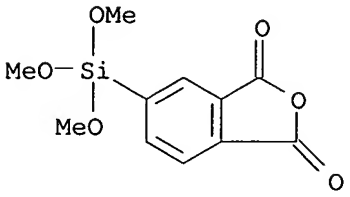
IT **158828-98-9 158829-00-6 158829-03-9 159438-75-2 159438-77-4 159519-41-2 159519-42-3**
RL: DEV (Device component use); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(ladder, pos.-working **photoresist composition** from)

RN 158828-98-9 HCAPLUS

CN 1,3-Isobenzofurandione, 5-(trimethoxysilyl)-, polymer with triethoxyphenylsilane (9CI) (CA INDEX NAME)

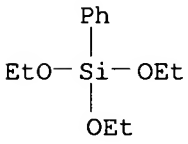
CM 1

CRN 158828-97-8
CMF C11 H12 O6 Si



CM 2

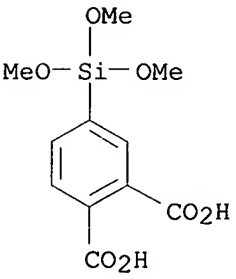
CRN 780-69-8
CMF C12 H20 O3 Si



RN 158829-00-6 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-(trimethoxysilyl)-, polymer with trimethoxy(4-methylphenyl)silane (9CI) (CA INDEX NAME)

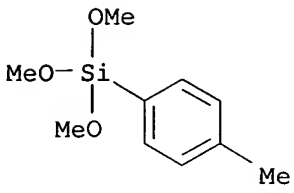
CM 1

CRN 158828-99-0
CMF C11 H14 O7 Si



CM 2

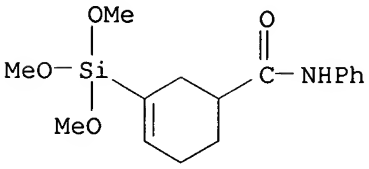
CRN 17873-01-7
CMF C10 H16 O3 Si



RN 158829-03-9 HCAPLUS
CN 3-Cyclohexene-1-carboxylic acid, 2-(trimethoxysilyl)-, 2-(1,3-dioxobutoxy)ethyl ester, polymer with N-phenyl-3-(trimethoxysilyl)-3-cyclohexene-1-carboxamide (9CI) (CA INDEX NAME)

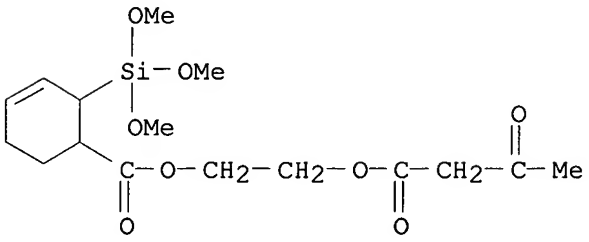
CM 1

CRN 158829-02-8
CMF C16 H23 N O4 Si



CM 2

CRN 158829-01-7
CMF C16 H26 O8 Si

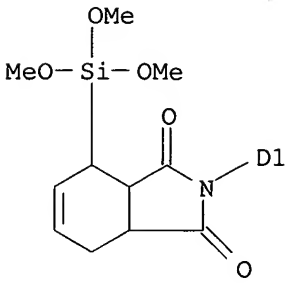


RN 159438-75-2 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-(hydroxyphenyl)-4-(trimethoxysilyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 159438-74-1
CMF C17 H21 N O6 Si
CCI IDS

D1—OH

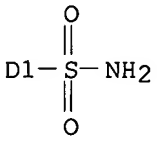


RN 159438-77-4 HCAPLUS
CN Benzenesulfonamide, ar-[1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4-(trimethoxysilyl)-2H-isoindol-2-yl]-, homopolymer (9CI) (CA INDEX NAME)

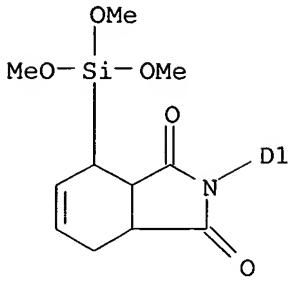
CM 1

CRN 159438-76-3
CMF C17 H22 N2 O7 S Si
CCI IDS

PAGE 1-A



PAGE 2-A



RN 159519-41-2 HCAPLUS
CN Poly[oxy[[2,3,3a,4,7,7a-hexahydro-2-(hydroxyphenyl)-1,3-dioxo-1H-isoindol-4-yl]methoxysilylene]], α-methyl-ω-methoxy- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 159519-42-3 HCAPLUS
CN Poly[oxy[[2-[(aminosulfonyl)phenyl]-2,3,3a,4,7,7a-hexahydro-1,3-dioxo-1H-isoindol-4-yl]methoxysilylene]], α-methyl-ω-methoxy- (9CI) (CA INDEX NAME)

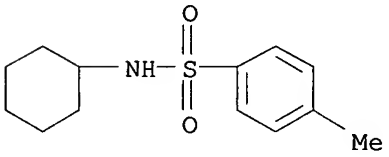
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L45 ANSWER 26 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:641832 HCAPLUS
DN 121:241832
TI High resolution positively working resist **composition** and patterning
IN Namiki, Takahisa; Yano, Ei; Watabe, Keiji; Igarashi, Yoshikazu
PA Fujitsu Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06130668	A2	19940513	JP 1992-282987	19921021
PRAI JP 1992-282987		19921021		

AB Claimed are (1) a resist **composition** containing alkali-soluble matrix resin and an agent releasing an alkaline compound under ionizing radiation, and (2) patterning by forming a resist film by the **composition**, irradiating ionizing radiation, and developing by water or aqueous alkaline The **compn**., e.g., [Co(NH2Me)5Br (ClO4)2] and a cresol novolak, is useful for manufacture of large-scale integrated semiconductor device.
IC ICM G03F007-039
ICS G03F007-004; G03F007-30; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
ST high resoln pos working **photoresist**; alkali sol matrix resin **photoresist**; ionizing radiation resist; alk compd releasing compd **photoresist**; cobalt amine complex **photoresist**; benzyl carbamate **photoresist**; sulfonamide alkali releasing compd **photoresist**

IT **Siloxanes** and **Silicones**, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(acrylphenyl-substituted, pos.-working ionizing radiation resist containing alkaline compound-releasing agent and)
IT Resists
(**photo-**, pos.-working, alkali-soluble matrix resin and alkaline compound-releasing compound for)
IT **80-30-8**, N-Cyclohexyl-4-methylphenylsulfonamide 61160-95-0 158325-31-6
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working ionizing radiation **resist** containing alkali-soluble resin and)
IT **80-30-8**, N-Cyclohexyl-4-methylphenylsulfonamide
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working ionizing radiation **resist** containing alkali-soluble resin and)
RN 80-30-8 HCAPLUS
CN Benzenesulfonamide, N-cyclohexyl-4-methyl- (9CI) (CA INDEX NAME)



L45 ANSWER 27 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:617658 HCAPLUS
DN 121:217658
TI Water-developable oxygen plasma-resistant photoresist
IN Aoso, Toshiaki; Mizutani, Kazuyoshi
PA Fuji Photo Film Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 47 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06059458	A2	19940304	JP 1991-12671	19910111
PRAI	JP 1991-12671		19910111		

AB The title photoresist comprises a polysiloxane containing ≥1 mol% of siloxane units derived from the cyclization-thermal addition products of organosilicon compds. and a photosensitive azide. The title neg.-working photoresist is useful in making lithog. plates, in color proofing, in making transparencies for overhead projectors, and in fine patterning for semiconductor device fabrication.
IC ICM G03F007-075
ICS C08L083-04; G03F003-10; G03F007-00; G03F007-008; G03F007-038; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
IT 158257-43-3P 158257-45-5P 158257-47-7P 158257-50-2P 158257-52-4P

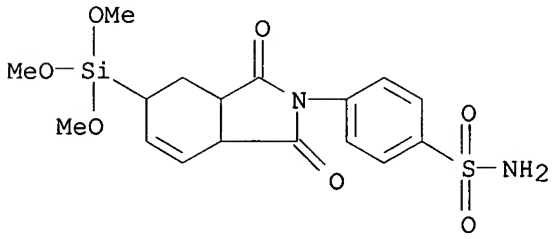
158257-54-6P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Water-developable oxygen plasma-**resistant** **photoresist** containing)

IT **158257-54-6P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Water-developable oxygen plasma-**resistant** **photoresist** containing)

RN 158257-54-6 HCAPLUS
CN Benzenesulfonamide, 4-[1,3,3a,4,5,7a-hexahydro-1,3-dioxo-5-(trimethoxysilyl)-2H-isoindol-2-yl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 158257-53-5
CMF C17 H22 N2 O7 S Si



L45 ANSWER 28 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:284547 HCAPLUS
DN 120:284547
TI **Photosensitive** polyimides consisting of simple mixtures of 4-substituted diazonaphthoquinones and polyamic acids
AU Hayase, Shuzi; Mikogami, Yukihiro; Takano, Kei; Nakano, Yoshihiko; Hayase, Rumiko
CS Res. Dev. Cent., Toshiba Corp., Kawasaki, 210, Japan
SO Polymers for Advanced Technologies (1993), 4(4), 302-8
CODEN: PADTE5; ISSN: 1042-7147
DT Journal
LA English
AB Polyimide resists that can be developed with a basic aqueous solution were produced by simple mixts. of conventional polyamic acids and naphthoquinone diazides in which sulfonate groups are substituted at the 4-position. The diazonaphthoquinones bearing electron-withdrawing groups gave neg. tone resists. Those bearing electron-donating groups gave pos. tone resists. The difference in the resist behaviors depending on the **photoactive** structure was explained by crosslinking caused by **photogenerated** sulfonic acids. The thermal stability of polyimides prepared from the resists was almost the same as that of conventional polyimides.
CC 74-1 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST polyamic acid naphthoquinone diazide **photoresist** polyimide; microlithog polyimide resist **photosensitive** precursor
IT Polyimides, preparation

RL: PREP (Preparation)
(in lithog. imaging with **photoresists** based on diazonaphthoquinones and polyamic acids, high-temperature-post-exposure bake for)

IT Resists
(**photo-**, mixts. of diazonaphthoquinones and polyamic acids as, pos. and neg. imaging with, high-temperature-post-exposure bake for polyimide formation in)

IT Polyketones
RL: USES (Uses)
(polyamic acid-polyether-, **photoresist** containing, **photoactive** diazonaphthoquinones for, for formation of polyimide patterns developable with basic aqueous solns.)

IT Polyethers, uses
RL: USES (Uses)
(polyamic acid-polyketone-, **photoresist** containing, **photoactive** diazonaphthoquinones for, for formation of polyimide patterns developable with basic aqueous solns.)

IT Polyamic acids
RL: USES (Uses)
(polyether-polyketone-, **photoresist** containing, **photoactive** diazonaphthoquinones for, for formation of polyimide patterns developable with basic aqueous solns.)

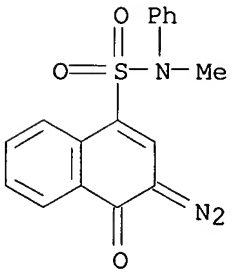
IT 75040-17-4 84522-08-7 114019-90-8 125857-81-0 126247-25-4 138709-92-9 144919-35-7 144919-40-4 147125-93-7 154576-92-8 154576-93-9 **154576-94-0** 154576-95-1
RL: USES (Uses)
(**photoresist composition** containing polyamic acid and, high-temperature-post-exposure bake in producing polyimide images from)

IT 4727-29-1 **84329-58-8**
RL: USES (Uses)
(**photoresist** containing, **photoactive** diazonaphthoquinones for, for formation of polyimide patterns developable with basic aqueous solns.)

IT **154576-94-0**
RL: USES (Uses)
(**photoresist composition** containing polyamic acid and, high-temperature-post-exposure bake in producing polyimide images from)

RN 154576-94-0 HCAPLUS

CN 1-Naphthalenesulfonamide, 3-diazo-3,4-dihydro-N-methyl-4-oxo-N-phenyl- (9CI) (CA INDEX NAME)

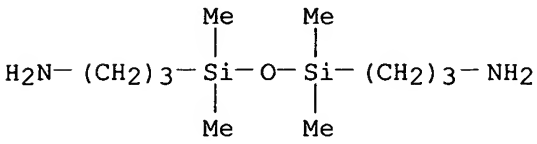


IT **84329-58-8**
RL: USES (Uses)
(**photoresist** containing, **photoactive** diazonaphthoquinones for, for formation of polyimide patterns

developable with basic aqueous solns.)
RN 84329-58-8 HCAPLUS
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

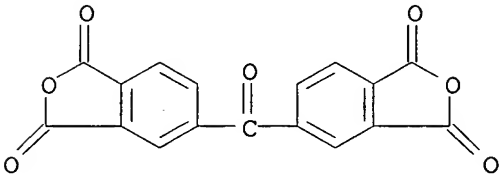
CM 1

CRN 2469-55-8
CMF C10 H28 N2 O Si2



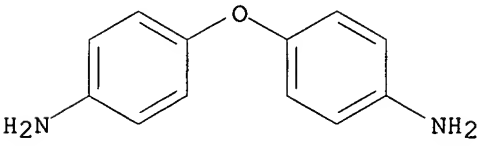
CM 2

CRN 2421-28-5
CMF C17 H6 O7



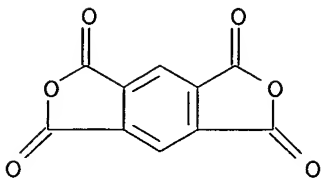
CM 3

CRN 101-80-4
CMF C12 H12 N2 O



CM 4

CRN 89-32-7
CMF C10 H2 O6



L45 ANSWER 29 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:19271 HCAPLUS
DN 120:19271
TI **Photosensitive**, heat-resistant polymer **compositions**
IN Yoshikawa, Haruhiko; Kataoka, Fumio; Shoji, Fusaji; Nishikame, Masashi; Obara, Isao
PA Hitachi Ltd, Japan; Hitachi Chemical Co Ltd
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

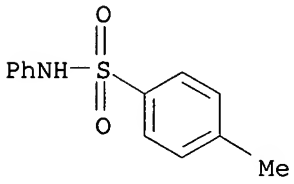
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05080514	A2	19930402	JP 1991-241077	19910920
PRAI	JP 1991-241077		19910920		

AB The title **compns.** comprise (1) polymer having a repeating unit COZ1(COOH)2CONHZ2NH (Z1 = C≥4 organic group having 4 valences; Z2 = divalent organic group having an aromatic ring or Si) 100, (2) amine compound having an unsatd. bond 1-400, and (3) sulfonamide compound selected from R1SO2NHR2, R1SO2N(R2)2, and R1SO2NHZ3NHSO2R2 (R1 = aromatic group, alkyl; R2 = H, aromatic group, alkyl; Z3 = alkylene, divalent organic group having an aromatic ring) 0.5-50 weight parts. The **compns.** show high developing rate, good mech. strength, and improved workability in forming insulating and protective coatings for semiconductor elements and electronics.
IC ICM G03F007-038
ICS G03F007-004; G03F007-075; H01L021-027; H01L021-312; H05K003-28
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
ST **photoresist** heat resistant; polyamide sulfonamide unsatd amine **photoresist**
IT Polyamides, uses
RL: USES (Uses)
(neg.-working **photoresists** from)
IT Resists
(**photo-**, neg.-working, containing polyamides, unsatd. amines, and sulfonamides)
IT **68-34-8**, p-Toluenesulfonylanilide **70-55-3**, p-Toluenesulfonamide **80-39-7**, p-Toluenesulfonyl-N-ethylamide **98-10-2**, Benzenesulfonamide **599-86-0 649-15-0 1129-26-6**, p-Methoxybenzenesulfonamide **1899-94-1**, m-Toluenesulfonamide **1907-65-9 69728-92-3 74043-79-1 115166-68-2 117964-11-1 151619-27-1**
RL: USES (Uses)
(neg.-working **photoresist** containing, for rapid developability)
IT 105-16-8, 2-(N,N-Diethylamino)ethyl methacrylate 2867-47-2, 2-(N,N-Dimethylamino)ethyl methacrylate 20602-77-1, 3-(N,N-

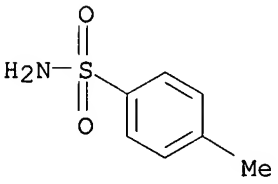
Dimethylamino)propyl methacrylate 25085-92-1 26298-81-7, 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer 26615-45-2, 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer, sru 60283-41-2 **84329-58-8 84329-59-9** 117247-38-8
RL: USES (Uses)
(neg.-working **photoresist** from)

IT **68-34-8**, p-Toluenesulfonylanilide **70-55-3**, p-Toluenesulfonamide **80-39-7**, p-Toluenesulfonyl-N-ethylamide **98-10-2**, Benzenesulfonamide **599-86-0 649-15-0 1129-26-6**, p-Methoxybenzenesulfonamide **1899-94-1**, m-Toluenesulfonamide **1907-65-9 69728-92-3 74043-79-1 115166-68-2 117964-11-1 151619-27-1**
RL: USES (Uses)
(neg.-working **photoresist** containing, for rapid developability)

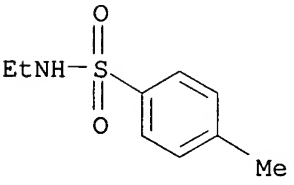
RN 68-34-8 HCAPLUS
CN Benzenesulfonamide, 4-methyl-N-phenyl- (9CI) (CA INDEX NAME)



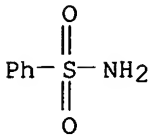
RN 70-55-3 HCAPLUS
CN Benzenesulfonamide, 4-methyl- (9CI) (CA INDEX NAME)



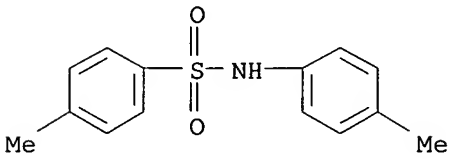
RN 80-39-7 HCAPLUS
CN Benzenesulfonamide, N-ethyl-4-methyl- (9CI) (CA INDEX NAME)



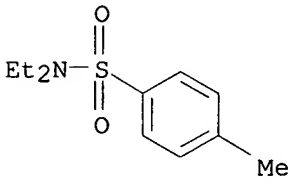
RN 98-10-2 HCAPLUS
CN Benzenesulfonamide (7CI, 8CI, 9CI) (CA INDEX NAME)



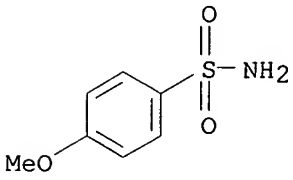
RN 599-86-0 HCAPLUS
CN Benzenesulfonamide, 4-methyl-N-(4-methylphenyl)- (9CI) (CA INDEX NAME)



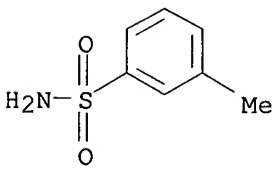
RN 649-15-0 HCAPLUS
CN Benzenesulfonamide, N,N-diethyl-4-methyl- (9CI) (CA INDEX NAME)



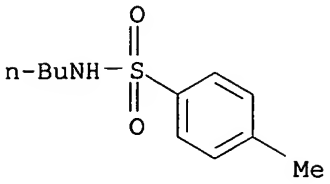
RN 1129-26-6 HCAPLUS
CN Benzenesulfonamide, 4-methoxy- (9CI) (CA INDEX NAME)



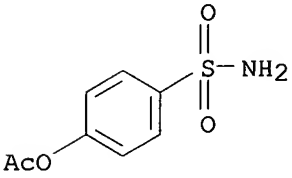
RN 1899-94-1 HCAPLUS
CN Benzenesulfonamide, 3-methyl- (9CI) (CA INDEX NAME)



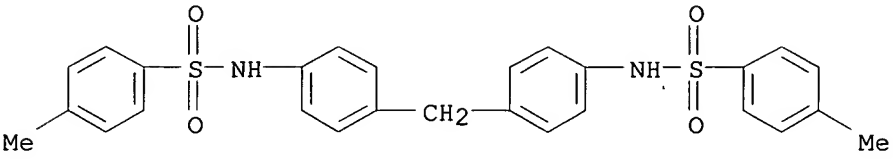
RN 1907-65-9 HCAPLUS
CN Benzenesulfonamide, N-butyl-4-methyl- (9CI) (CA INDEX NAME)



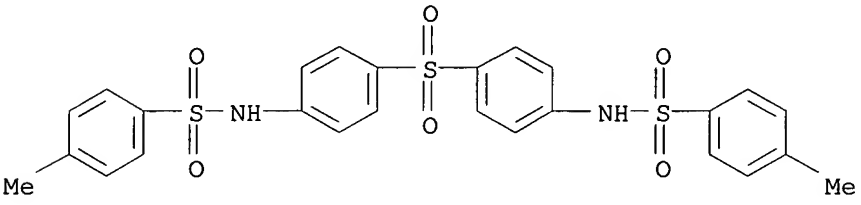
RN 69728-92-3 HCAPLUS
CN Benzenesulfonamide, 4-(acetyloxy)- (9CI) (CA INDEX NAME)



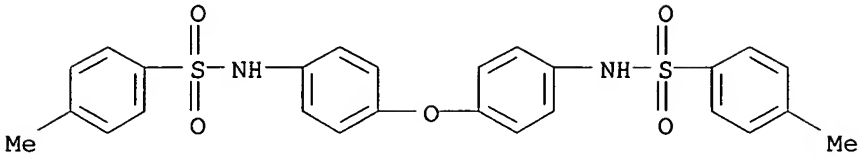
RN 74043-79-1 HCAPLUS
CN Benzenesulfonamide, N,N'-(methylenedi-4,1-phenylene)bis[4-methyl- (9CI) (CA INDEX NAME)



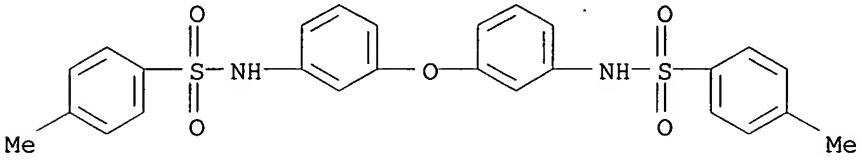
RN 115166-68-2 HCAPLUS
CN Benzenesulfonamide, N,N'-(sulfonyldi-4,1-phenylene)bis[4-methyl- (9CI) (CA INDEX NAME)



RN 117964-11-1 HCAPLUS
CN Benzenesulfonamide, N,N'-(oxydi-4,1-phenylene)bis[4-methyl- (9CI) (CA INDEX NAME)



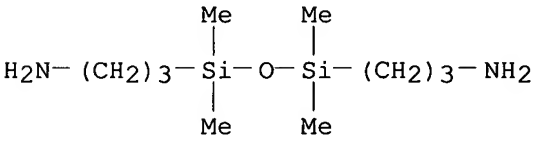
RN 151619-27-1 HCAPLUS
CN Benzenesulfonamide, N,N'-(oxydi-3,1-phenylene)bis[4-methyl- (9CI) (CA INDEX NAME)



IT **84329-58-8 84329-59-9**
RL: USES (Uses)
(neg.-working **photoresist** from)
RN 84329-58-8 HCAPLUS
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

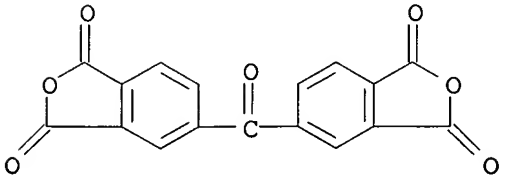
CM 1

CRN 2469-55-8
CMF C10 H28 N2 O Si2



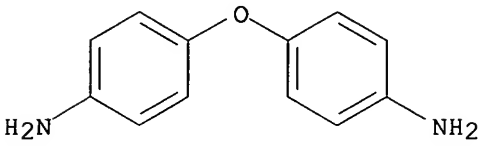
CM 2

CRN 2421-28-5
CMF C17 H6 O7



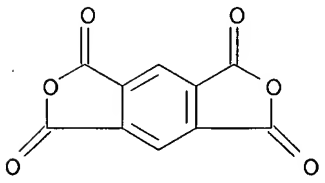
CM 3

CRN 101-80-4
CMF C12 H12 N2 O



CM 4

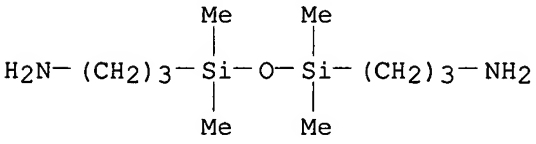
CRN 89-32-7
CMF C10 H2 O6



RN 84329-59-9 HCAPLUS
CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

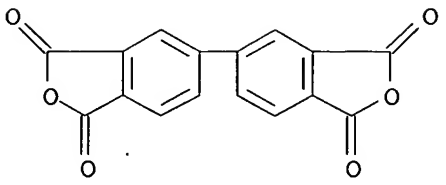
CM 1

CRN 2469-55-8
CMF C10 H28 N2 O Si2



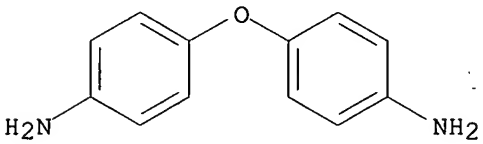
CM 2

CRN 2420-87-3
CMF C16 H6 O6



CM 3

CRN 101-80-4
CMF C12 H12 N2 O



L45 ANSWER 30 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:184619 HCAPLUS
DN 116:184619
TI Light-sensitive **compositions** containing modified **siloxanes** for presensitized plates and **photoresists**
IN Mizutani, Kazuyoshi; Aoai, Toshiaki
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 58 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 410760	A2	19910130	EP 1990-308212	19900726
	EP 410760	A3	19910821		
	EP 410760	B1	19940914		
	R: DE, GB				
	JP 03059667	A2	19910314	JP 1989-196108	19890728
	JP 2648969	B2	19970903		
	US 5143816	A	19920901	US 1990-555599	19900723
PRAI	JP 1989-196108	A	19890728		

AB Light-sensitive **compns.** for preparing presensitized plates and **photoresists** contain an orthoquinonediazide compound and a **polysiloxane** with >1 mol% of a structural unit derived from a product of a thermal cycloaddn. reaction. Thus, a **composition** for preparing a presensitized printing plate contained a **polysiloxane** obtained from acetoacetoxyethyl acrylate, 2-trimethyloxysilyl-1,3-butadiene, and N-phenylacrylamide, 2,3,4,4'-tetrahydroxybenzophenone 1,2-naphthoquinone-2-diazide-5-sulfonate, m-cresol-p-cresol-HCHO resin, Oil Blue 603, dichloroethane, and Me cellosolve. Plates prepared with this **composition** gave good pos. patterns.

IC ICM G03F007-075
CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST presensitized printing plate modified **siloxane**; **photoresist** modified **siloxane**

IT **Siloxanes** and **Silicones**, uses
RL: USES (Uses)
(**photosensitive compns**. containing cycloaddn. reaction-modified, for presensitized plates and **photoresists**)

IT Resists
(**photo-**, containing cycloaddn. reaction-modified **siloxanes**)

IT Printing plates
(presensitized, **photosensitive compns**. containing cycloaddn. reaction-modified **siloxanes** for fabrication of)

IT 27029-76-1 107761-81-9, 2,3,4,4'-Tetrahydroxyphenone 1,2-naphthoquinone-2-diazide-5-sulfonate
RL: USES (Uses)
(**photosensitive compns**. containing cycloaddn. reaction-modified **siloxanes** and, for presensitized plates and **photoresists**)

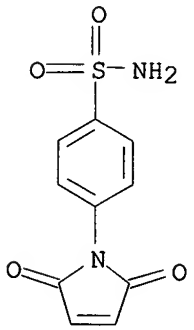
IT 142-45-0D, Acetylenedicarboxylic acid, cycloaddn. reaction products with **siloxanes** 541-59-3D, Maleimide, cycloaddn. reaction products with **siloxanes** 2210-24-4D, N-Phenylacrylamide, cycloaddn. reaction products with **siloxanes** 7300-91-6D, N-(p-Hydroxyphenyl)maleimide, cycloaddn. reaction products with **siloxanes** **7300-97-2D**, cycloaddn. reaction products with **siloxanes** 21282-96-2D, cycloaddn. reaction products with **siloxanes** **131290-90-9D**, cycloaddn. reaction products with **siloxanes**
RL: USES (Uses)
(**photosensitive compns**. containing, for presensitized plates and **photoresists**)

IT 780-69-8, Phenyltriethoxysilane 35692-30-9 93830-52-5, 2-Trimethoxysilyl-1,3-butadiene 138746-39-1
RL: USES (Uses)
(**siloxanes** from, for presensitized plates and **photoresists**)

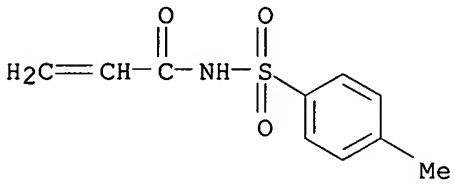
IT **7300-97-2D**, cycloaddn. reaction products with **siloxanes** **131290-90-9D**, cycloaddn. reaction products with **siloxanes**
RL: USES (Uses)
(**photosensitive compns**. containing, for presensitized plates and **photoresists**)

RN 7300-97-2 HCAPLUS

CN Benzenesulfonamide, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)- (9CI) (CA INDEX NAME)



RN 131290-90-9 HCAPLUS
CN 2-Propenamide, N-[(4-methylphenyl)sulfonyl]- (9CI) (CA INDEX NAME)



L45 ANSWER 31 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1989:487428 HCAPLUS
DN 111:87428
TI Energy beam-sensitive resin **compositions** for resists
IN Tanaka, Haruyori; Imamura, Saburo; Onose, Katsuhide
PA Nippon Telegraph and Telephone Public Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63239440	A2	19881005	JP 1987-197787	19870807
	JP 05044020	B4	19930705		
PRAI	JP 1986-278669		19861125		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title **compns.** with good resistance to O plasma comprise **silicone** resins I or II [X = carboxy, RCO, RCH(OH); R = H, (un)substituted hydrocarbon group; R1, R2, R3 = OH, alkyl, Ph (≥1 of R1-3 = OH); l, m, n ≥0] and ≥1 of naphthaloquinone derivative III (Z = substituent), polymer of -CH2C(R4)[(CH2)pY]T- repeating unit (R4 = H, alkyl, Ph; Y = H, alkyl, trialkylsilyl; T = SO2, OCO2; p ≥0), and polymer of -CHR5-O- repeating unit (R5 = H, alkyl, Ph, Si-containing alkyl).
IC ICM G03C001-72
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST **polysiloxane** resist; naphthoquinoneazxide **polysiloxane** resist; **silsesquioxane** resist
IT **Silsesquioxanes**
RL: PROC (Process)
(Ph, acetylated, oxidized, manufacture of, for resists resistant to oxygen plasma)
IT **Silsesquioxanes**
RL: PROC (Process)
(Ph, acetylated, reduced, manufacture of, for resists resistant to oxygen plasma)
IT **Siloxanes** and **Silicones**, compounds

RL: PROC (Process)
(di-Ph, acetylated, oxidized, manufacture of, for resists resistant to oxygen plasma)

IT **Siloxanes** and **Silicones**, compounds
RL: PROC (Process)
(di-Ph, acetylated, reduced, manufacture of, for resists resistant to oxygen plasma)

IT Resists
(electron-beam, **silicones** and **silsesquioxanes**, resistant to oxygen plasma)

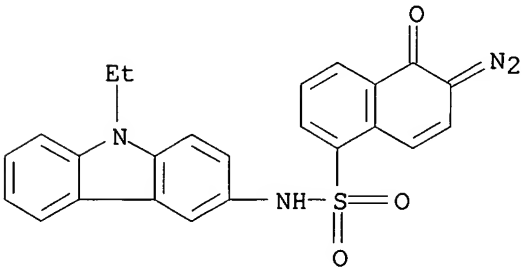
IT Resists
(**photo-**, **silicones** and **silsesquioxanes**, resistant to oxygen plasma)

IT Resists
(x-ray, **silicones** and **silsesquioxanes**, resistant to oxygen plasma)

IT 2481-86-9 2641-00-1 3770-97-6 9002-91-9, Acetaldehyde polymer 17755-39-4 18146-03-7D, polymers 20546-03-6 **23034-56-2** 25104-10-3, Poly(butenesulfone) 25608-11-1 25718-55-2, Carbon dioxide-ethylene oxide copolymer, SRU **38412-12-3** 39871-04-0 76169-06-7 **84110-59-8** 103090-89-7 103090-90-0 103090-91-1 103090-92-2 103118-16-7 111631-43-7 112935-65-6
RL: USES (Uses)
(**resists** containing, **resistant** to oxygen plasma)

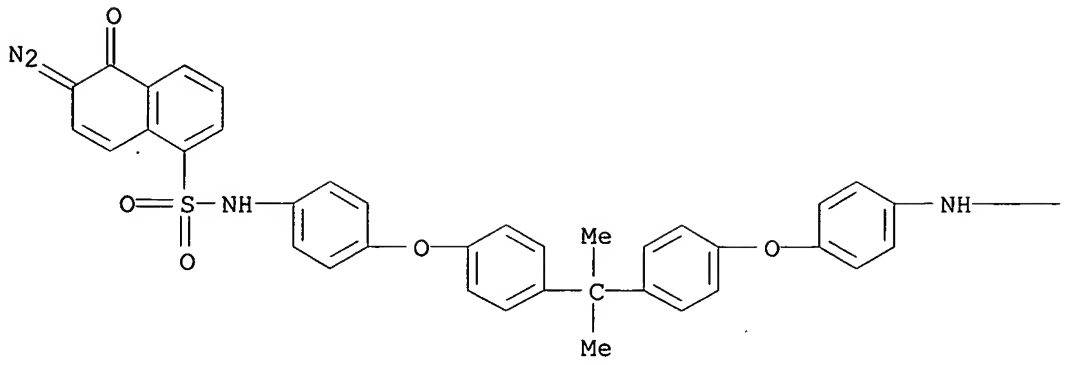
IT **23034-56-2 38412-12-3 84110-59-8**
RL: USES (Uses)
(**resists** containing, **resistant** to oxygen plasma)

RN 23034-56-2 HCAPLUS
CN 1-Naphthalenesulfonamide, 6-diazo-N-(9-ethyl-9H-carbazol-3-yl)-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

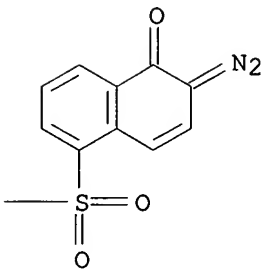


RN 38412-12-3 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1-methylethylidene)bis(4,1-phenyleneoxy-4,1-phenylene)]bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A



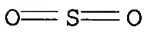
PAGE 1-B



RN 84110-59-8 HCAPLUS
CN Silane, ethenyltrimethyl-, polymer with sulfur dioxide (9CI) (CA INDEX NAME)

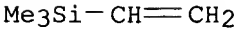
CM 1

CRN 7446-09-5
CMF O2 S



CM 2

CRN 754-05-2
CMF C5 H12 Si



L45 ANSWER 32 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1989:125443 HCAPLUS
DN 110:125443
TI **Photosensitive** resin **composition** for positive-working

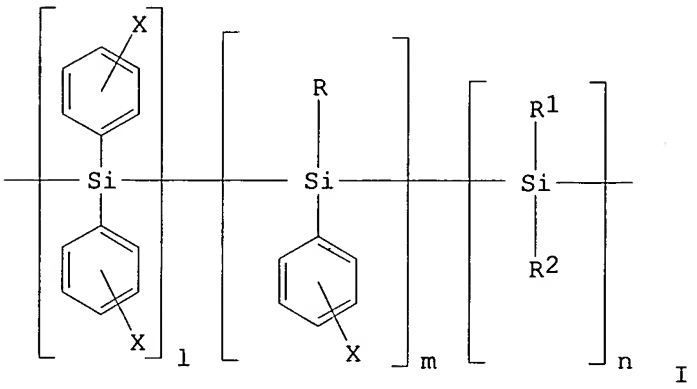
photoresist

IN Imamura, Saburo; Tanaka, Haruyori; Onose, Katsuhide
PA Nippon Telegraph and Telephone Public Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63195649	A2	19880812	JP 1987-27831	19870209
PRAI JP 1987-27831		19870209		

GI



I

AB The title **composition** comprises a polysilane I [X = R3CO-, R3C(OH)H- (R3 = hydrocarbyl or substituted hydrocarbyl), carboxyl; R, R1, R2 = OH, C1-4 alkyl, phenyl; l, m, n, = 0 or pos. integer; l and m may not be zero at the same time], a solvent, and an o-diazonaphthoquinone derivative (5-30 weight% vs. polymer) as a dissoln.-inhibiting agent. This **composition** shows excellent O plasma resistance.

IC ICM G03C001-72
ICS G03F007-08
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST pos working **photoresist** resin **compn**; silane **photoresist** resin **compn**

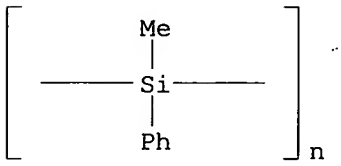
IT Resists
(**photo-**, pos.-working, containing polysilane and naphthoquinone derivs.)

IT **76188-55-1**, Poly(phenylmethyl silane)
RL: USES (Uses)
(modified, for pos.-working **photoresist composition**)

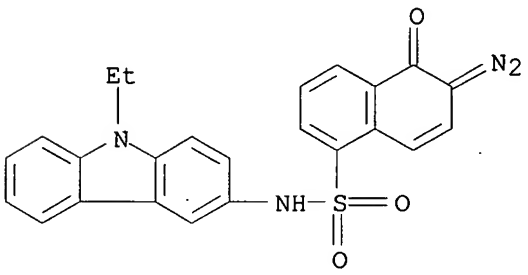
IT 2481-86-9 2641-00-1 3770-97-6 17755-39-4 20546-03-6 **23034-56-2** 32060-64-3 **38412-12-3** 39871-04-0 69039-70-9 82332-48-7 103090-89-7 103118-16-7 119549-88-1 119549-89-2
RL: USES (Uses)
(pos.-working **photoresist composition** containing)

IT **76188-55-1**, Poly(phenylmethyl silane)

RL: USES (Uses)
(modified, for pos.-working **photoresist composition**)
RN 76188-55-1 HCAPLUS
CN Poly(methylphenylsilylene) (9CI) (CA INDEX NAME)

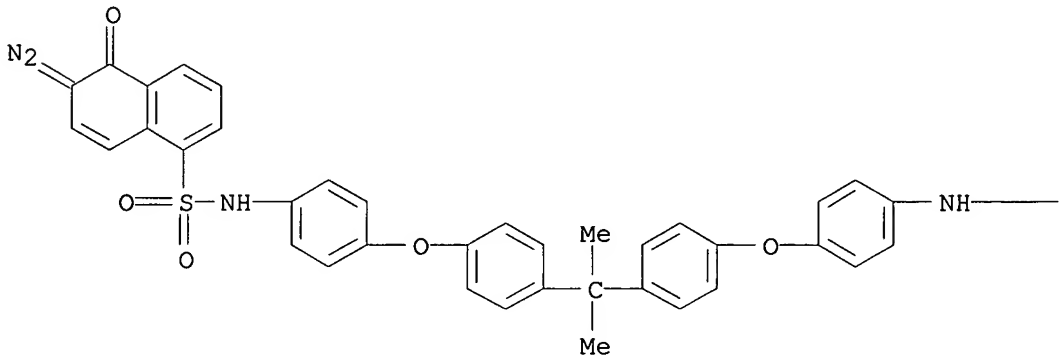


IT **23034-56-2 38412-12-3**
RL: USES (Uses)
(pos.-working **photoresist composition** containing)
RN 23034-56-2 HCAPLUS
CN 1-Naphthalenesulfonamide, 6-diazo-N-(9-ethyl-9H-carbazol-3-yl)-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

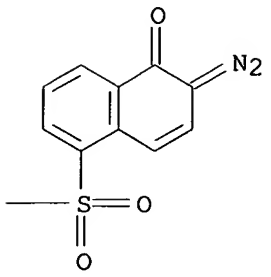


RN 38412-12-3 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1-methylethylidene)bis(4,1-phenyleneoxy-4,1-phenylene)]bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L45 ANSWER 33 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1989:125433 HCAPLUS
DN 110:125433
TI **Photosensitive** and high energy beam-sensitive resin **composition** containing substituted **polysiloxane**
IN Imamura, Saburo; Onose, Katsuhide; Tanaka, Akinobu
PA Nippon Telegraph and Telephone Public Corp., Japan
SO Eur. Pat. Appl., 63 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 232167	A2	19870812	EP 1987-300976	19870204
	EP 232167	A3	19871125		
	EP 232167	B1	19881228		
	R: DE, FR, GB, NL				
	JP 62184028	A2	19870812	JP 1986-25274	19860207
	JP 02038126	B4	19900829		
	JP 62212644	A2	19870918	JP 1986-56363	19860314
	JP 06003548	B4	19940112		
	JP 62220949	A2	19870929	JP 1986-65123	19860324
	JP 08003637	B4	19960117		
	JP 62240954	A2	19871021	JP 1986-84683	19860412
	JP 62293239	A2	19871219	JP 1986-136816	19860612
	JP 06093123	B4	19941116		
	US 5158854	A	19921027	US 1990-576157	19900829
PRAI	JP 1986-25274	A	19860207		
	JP 1986-56363	A	19860314		
	JP 1986-65123	A	19860324		
	JP 1986-84683	A	19860412		
	JP 1986-136816	A	19860612		
	US 1987-9475	B1	19870202		
	US 1988-233983	B1	19880811		
	US 1990-497790	B1	19900321		

AB The title resin **compns.** comprise a hydrophilic group-substituted **siloxane** or **silsesquioxane** and a solvent. The resins are prepared by acylation of the **siloxane**, converting the acyl group to a carboxylic group or α-hydroxyalkyl group, and further substitution of the acyl, carboxyl, or hydroxyalkyl group. The resins have high sensitivity to high-energy electron beams, x-rays, or deep UV light and are excellent in resistance to plasma etching. The **composition** may also contain sensitizers, **photosensitive**

agents, and dissoln. inhibitors to provide a resist material with further improved properties. Thus, **phenylsilsesquioxane** was acylated with acetyl chloride, dissolved in Et cellosolve acetate, an o-diazonaphthoquinone derivative sensitizer added, and the **composition** coated on a Si wafer to obtain a resist. The resist had a **photosensitivity** 50 mJ/cm2 and, when used to form a pattern, had a line resolution of 0.5μ.

IC ICM G03F007-10

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST **photoresist compn siloxane silsesquioxane**; acylated **siloxane** resist **compn** ; x ray resist substituted **siloxane**; electron beam resist substituted **siloxane**; UV resin substituted **siloxane**

IT Polycarbonates, uses and miscellaneous
Polyethers, uses and miscellaneous
Polysulfones, uses and miscellaneous
RL: USES (Uses)
(resist **composition** containing, high-energy)

IT **Silsesquioxanes**
RL: USES (Uses)
(Ph, hydrophilic group-substituted, for high-energy resists)

IT **Siloxanes** and **Silicones**, uses and miscellaneous
RL: USES (Uses)
(di-Ph, hydrophilic group-substituted, for high-energy resists)

IT Resists
(electron-beam, hydrophilic group-substituted **siloxanes** or **silsesquioxanes** as)

IT Resists
(**photo**-, hydrophilic group-substituted **siloxanes** or **silsesquioxanes** as)

IT Resists
(x-ray, hydrophilic group-substituted **siloxanes** or **silsesquioxanes** as)

IT 75-36-5, Acetyl chloride 79-03-8, Propionyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(Friedel-Crafts reaction of, with **phenylsilsesquioxanes**)

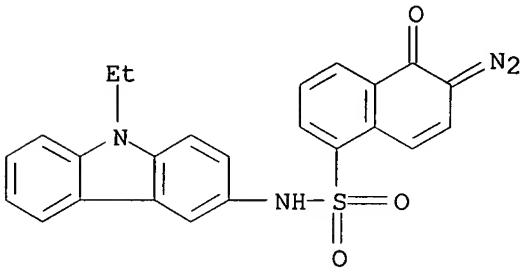
IT 56-23-5, Carbon tetrachloride, uses and miscellaneous 75-71-8, Dichlorodifluoromethane 75-73-0, Carbon tetrafluoride 7440-37-1, Argon, uses and miscellaneous 7782-44-7, Oxygen, uses and miscellaneous
RL: PRP (Properties)
(plasma of, resist **composition** resistant to)

IT 90-94-8, Michler's ketone 602-87-9, 5-Nitroacenaphthene 607-57-8, 2-Nitrofluorene 1785-51-9, Pyrene-1,6-quinone 2481-86-9 2498-66-0, 1,2-Benzoanthraquinone 2641-00-1 2915-44-8, 4,4'-Diazidodiphenyl methane 5284-79-7 5284-80-0, 4,4'-Diazidodibenzal acetone 5522-43-0, 1-Nitropyrene 5610-94-6 7300-27-8, 4,4'-Diazidodiphenyl sulfone 9002-91-9 20237-98-3 20546-03-6 **23034-56-2** 25104-10-3 25608-11-1 27789-15-7 30525-89-4, Paraformaldehyde 32060-64-3 39871-04-0 42397-65-9, 1,8-Dinitropyrene 42978-64-3, Cyanoacridine 48180-65-0, 4,4'-Diazidodiphenyl ether 69039-70-9 75742-13-1, 3,3'-Diazidodiphenyl sulfone 75758-16-6, 3,3'-Dichloro-4,4'-diazidodiphenylmethane **91380-17-5** 95837-44-8, 3,3'-Diazidodiphenyl methane 103090-89-7 103090-90-0 103090-92-2 103118-16-7 110928-59-1 110928-60-4 113213-80-2 **113245-10-6** 113245-11-7 **113245-12-8 113245-13-9 113245-14-0 113245-15-1 113245-16-2 113373-98-1** 113373-99-2
RL: USES (Uses)

(radiation-sensitive **resist composition** containing acylated **diphenylsiloxanes** and)

IT **23034-56-2 91380-17-5 113245-10-6 113245-12-8 113245-13-9 113245-14-0 113245-15-1 113245-16-2 113373-98-1**
RL: USES (Uses)
(radiation-sensitive **resist composition** containing acylated **diphenylsiloxanes** and)

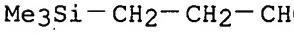
RN 23034-56-2 HCAPLUS
CN 1-Naphthalenesulfonamide, 6-diazo-N-(9-ethyl-9H-carbazol-3-yl)-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)



RN 91380-17-5 HCAPLUS
CN Propanal, 3-(trimethylsilyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

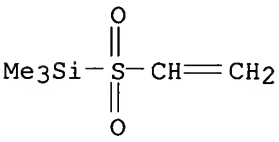
CRN 18146-03-7
CMF C6 H14 O Si



RN 113245-10-6 HCAPLUS
CN Silane, (ethenylsulfonyl)trimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

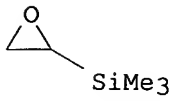
CRN 113245-09-3
CMF C5 H12 O2 S Si



RN 113245-12-8 HCAPLUS
CN Silane, trimethyloxiranyl-, polymer with carbon dioxide (9CI) (CA INDEX NAME)

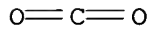
CM 1

CRN 16722-09-1
CMF C5 H12 O Si



CM 2

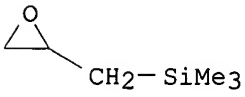
CRN 124-38-9
CMF C O2



RN 113245-13-9 HCAPLUS
CN Silane, trimethyl(oxiranylmethyl)-, polymer with carbon dioxide (9CI) (CA INDEX NAME)

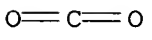
CM 1

CRN 16722-11-5
CMF C6 H14 O Si



CM 2

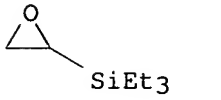
CRN 124-38-9
CMF C O2



RN 113245-14-0 HCAPLUS
CN Silane, triethyloxiranyl-, polymer with carbon dioxide (9CI) (CA INDEX NAME)

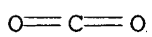
CM 1

CRN 18388-62-0
CMF C8 H18 O Si



CM 2

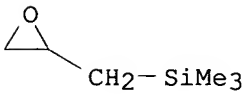
CRN 124-38-9
CMF C O2



RN 113245-15-1 HCAPLUS
CN Silane, trimethyloxiranyl-, polymer with carbon dioxide and trimethyl(oxiranylmethyl)silane (9CI) (CA INDEX NAME)

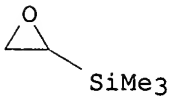
CM 1

CRN 16722-11-5
CMF C6 H14 O Si



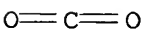
CM 2

CRN 16722-09-1
CMF C5 H12 O Si



CM 3

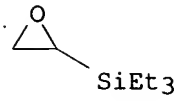
CRN 124-38-9
CMF C O2



RN 113245-16-2 HCAPLUS
CN Silane, triethyloxiranyl-, polymer with carbon dioxide and trimethyloxiranylsilane (9CI) (CA INDEX NAME)

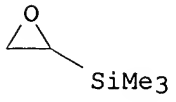
CM 1

CRN 18388-62-0
CMF C8 H18 O Si



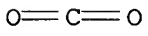
CM 2

CRN 16722-09-1
CMF C5 H12 O Si

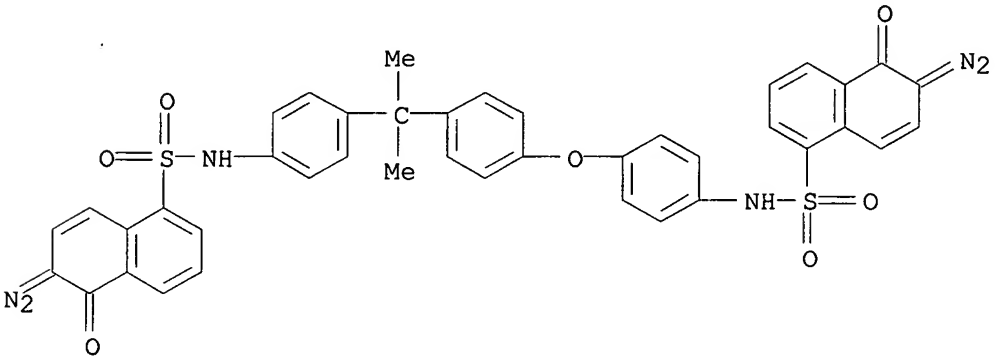


CM 3

CRN 124-38-9
CMF C O2



RN 113373-98-1 HCAPLUS
CN 1-Naphthalenesulfonamide, 6-diazo-N-[4-[1-[4-[4-[[(6-diazo-5,6-dihydro-5-oxo-1-naphthalenyl)sulfonyl]amino]phenoxy]phenyl]-1-methylethyl]phenyl]-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)



L45 ANSWER 34 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1988:46856 HCAPLUS

DN 108:46856
TI **Photosensitive compositions**
IN Toriumi, Minoru; Shiraishi, Hiroshi; Irie, Ryotaro; Koibuchi, Shigeru
PA Hitachi Chemical Co., Ltd., Japan
SO Ger. Offen., 11 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3700169	A1	19870716	DE 1987-3700169	19870105
	DE 3700169	C2	19890316		
	JP 62160441	A2	19870716	JP 1986-1331	19860109
	US 4792516	A	19881220	US 1987-373	19870105
PRAI	JP 1986-1331	A	19860109		

AB **Photosensitive compns.** for the production of neg.- or pos.-working **photoresists** having outstanding contrast and sensitivity for use in the microlithog. production of semiconductor elements are composed of a **photosensitive** component, such as an aromatic diazo compound or an aromatic azide, a polymer, and a quaternary alkylammonium salt with straight or branched chain alkyl groups with 1-7 C atoms. Thus, a **photoresist composition** containing a cresol novolak resin, a 1,2-naphthoquinone-2-diazide-5-sulfonic acid ester, tetraamylammonium chloride (I), and cellosolve acetate was coated upon a Si wafer, dried, exposed, and developed to show improved contrast over a I-free control.

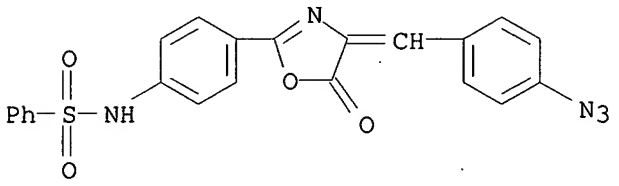
IC ICM G03F007-00
ICS G03F007-08
ICA H01L021-312; C07C087-30; C07C093-04; C07D263-42; C07D413-04
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST **photoresist** quaternary alkylammonium salt contrast; sensitivity **photoresist** quaternary alkylammonium salt; pos **photoresist** quaternary alkylammonium salt; **photoresist** quaternary alkylammonium salt; ammonium salt quaternary **photoresist**
IT Phenolic resins, uses and miscellaneous
RL: USES (Uses)
(**photoresist** containing quaternary alkylammonium salt and, with improved contrast and sensitivity)
IT **Silsesquioxanes**
RL: USES (Uses)
(Ph, **photoresist** containing quaternary alkylammonium salt and, with improved contrast and sensitivity)
IT Quaternary ammonium compounds, uses and miscellaneous
RL: USES (Uses)
(alkyl, neg.- and pos.-working **photoresists** containing, for improved contrast and sensitivity)
IT Resists
(**photo-**, neg.-working, containing quaternary alkylammonium salt for improved contrast and sensitivity)
IT Resists
(**photo-**, pos.-working, containing quaternary alkylammonium salt for improved contrast and sensitivity)
IT 56-34-8, Tetraethylammonium chloride 68-05-3, Tetraethylammonium iodide 123-41-1 4965-17-7, Tetraamylammonium chloride 5922-92-9, Tetrahexylammonium chloride
RL: USES (Uses)
(neg.- and pos.-working **photoresists** containing, for improved contrast and sensitivity)

IT 6425-92-9 9016-83-5, Cresol-formaldehyde copolymer 20546-03-6D, 1,2-Naphthoquinonediazide-5-sulfonic acid, esters 59269-51-1, Maruzen resin with R M 96155-59-8 100469-65-6, OFPR 5000 **105959-37-3** 105959-48-6 107147-43-3 112095-83-7
RL: USES (Uses)
(**photoresist** containing quaternary alkylammonium salt and, with improved contrast and sensitivity)

IT **105959-37-3**
RL: USES (Uses)
(**photoresist** containing quaternary alkylammonium salt and, with improved contrast and sensitivity)

RN 105959-37-3 HCAPLUS

CN Benzenesulfonamide, N-[4-[4-[(4-azidophenyl)methylene]-4,5-dihydro-5-oxo-2-oxazolyl]phenyl]- (9CI) (CA INDEX NAME)



L45 ANSWER 35 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:625994 HCAPLUS

DN 107:225994

TI Resist **composition** and their uses

IN Tanaka, Haruyori; Morita, Masao

PA Nippon Telegraph and Telephone Public Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

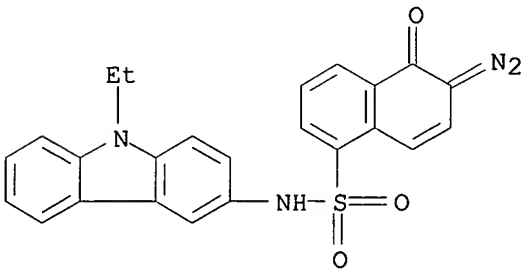
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62036662	A2	19870217	JP 1985-175762	19850812
PRAI	JP 1985-175762		19850812		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

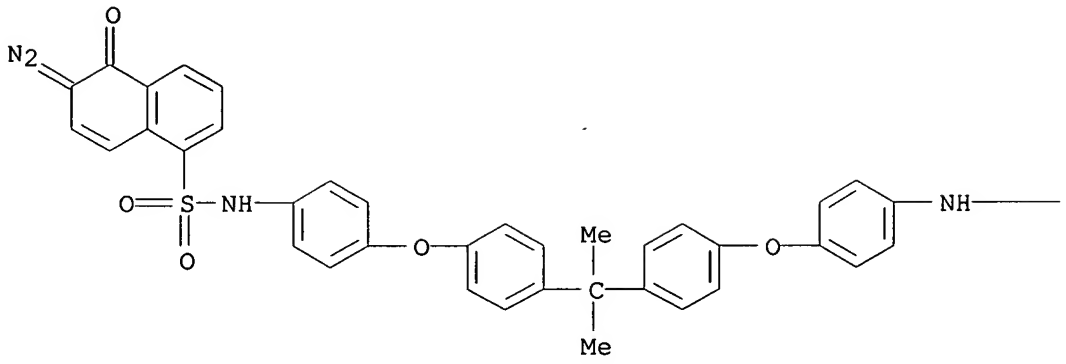
AB The claimed **photoresist compns.** contain a **siloxane** of the formula I or II [Y = OH, (CH2)pCO2H; R, R1, R2 = H, alkyl, Ph; m, n, q = 0, pos. integer; p ≥ 1; m, n cannot be 0 simultaneously]. The resists may also contain a naphthoquinonediazide derivative III [X = OH, OCl, OF, IV, 8-hydroxy-1-naphthyloxy, 3,5-dihydroxyphenoxy, 4-benzoyl-2,3-dihydroxyphenoxy, V, 1-hydroxyanthraquinon-2-yloxy, PhNH-p-C6H4N:NO, 9-ethylcarbazol-3-ylamino, 4-benzoyl-3-hydroxy-2-(1,2-naphthoquinon diazide-(2)-4-ylsulfonyloxy)phenoxy; Z = VI, O-o-C6H4CO-o-C6H4O, NH-p-C6H4O-p-C6H4CMe2-p-C6H4O-p-C6H4NH]. The **compns.** are especially useful for forming dry-etching-resistant patterns on organic polymer films.

IC ICM G03C001-72
ICS G03F007-08
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76
ST **photoresist phenylsiloxane** deriv quinonediazide; **siloxane** phenyl **photoresist** quinonediazide; **silsesquioxane** phenyl **photoresist** quinonediazide
IT **Silsesquioxanes**
RL: USES (Uses)
(di-Ph, **photoresist compns.** containing naphthoquinonediazide derivs. and)
IT **Siloxanes** and **Silicones**, uses and miscellaneous
RL: USES (Uses)
(di-Ph, **photoresist compns.** containing naphthoquinonediazide derivs. and)
IT Resists
(**photo-, phenylsiloxane**-quinonediazide derivative mixts. as)
IT 2481-86-9 2641-00-1 20546-03-6 **23034-56-2 38412-12-3** 39871-04-0 69039-70-9 103090-89-7 103090-90-0 103090-91-1 103090-92-2 103118-16-7 110928-59-1 110928-60-4
RL: USES (Uses)
(**photoresist compns.** containing **phenylsiloxane** derivs. and)
IT **23034-56-2 38412-12-3**
RL: USES (Uses)
(**photoresist compns.** containing **phenylsiloxane** derivs. and)
RN 23034-56-2 HCAPLUS
CN 1-Naphthalenesulfonamide, 6-diazo-N-(9-ethyl-9H-carbazol-3-yl)-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

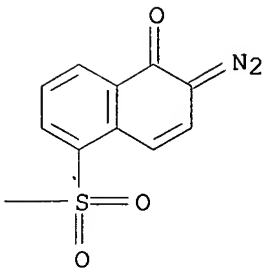


RN 38412-12-3 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1-methylethylidene)bis(4,1-phenyleneoxy-4,1-phenylene)]bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L45 ANSWER 36 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1987:625993 HCAPLUS
DN 107:225993
TI **Photosensitive** resin **compositions** and their uses
IN Tanaka, Haruyori; Morita, Masao; Imamura, Saburo
PA Nippon Telegraph and Telephone Public Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62036661	A2	19870217	JP 1985-175761	19850812
PRAI	JP 1985-175761		19850812		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The claimed **photosensitive** resin **compns.** containing a **siloxane** of the formula I (R, R1, R2 = H, alkyl, Ph; m, n, p = 0, pos. integer; m, n cannot be 0 simultaneously) and a naphthoquinonediazide derivative II [X = OH, OCl, OF, III, 8-hydroxy-1-naphthyloxy, 3,5-dihydroxyphenoxy; 4-benzoyl-2,3-dihydroxyphenoxy, IV,

1-hydroxyanthraquinone-2-yloxy, PhNH-p-C6H4N:NO, 2-hydroxy-3-(1,2-naphthoquinone-2-diazide-4-ylsulfonyloxy)benzophenon-4-yloxy, 9-ethylcarbazol-3-ylamino; Z = V, o-OC6H4CO-o-C6H4O, NH-p-C6H4O-p-C6H4CMe2-p-C6H4O-p-C6H4NH]. Hydroxyphenyl **silsesquioxanes** may be used instead of I in the above **compns**. The **compns**. are especially useful for forming dry-etching-resistant patterns on organic polymer layers.

IC ICM G03C001-72
ICS G03F007-08

CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 76

ST **photoresist** hydroxyphenyl **siloxane** quinonediazide; **silsesquioxane** hydroxyphenyl **photoresist** quinonediazide

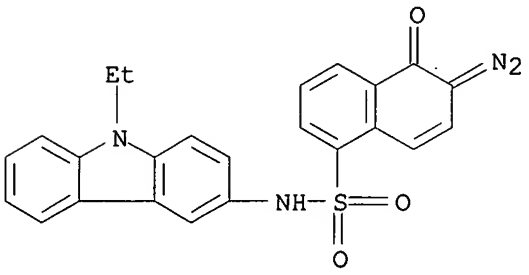
IT **Siloxanes** and **Silicones**, uses and miscellaneous
Silsesquioxanes
RL: USES (Uses)
(hydroxyphenyl, **photoresist compns**. containing naphthoquinonediazide derivs. and)

IT Resists
(**photo**-, hydroxyphenyl **siloxane**-quinonediazide compound mixts. as)

IT 2481-86-9 2641-00-1 20546-03-6 **23034-56-2 38412-12-3** 39871-04-0 69039-70-9 103090-89-7 103090-90-0 103090-91-1 103090-92-2 103118-16-7 110928-59-1 110928-60-4
RL: USES (Uses)
(**photoresist compns**. containing hydroxyphenyl **siloxanes** and)

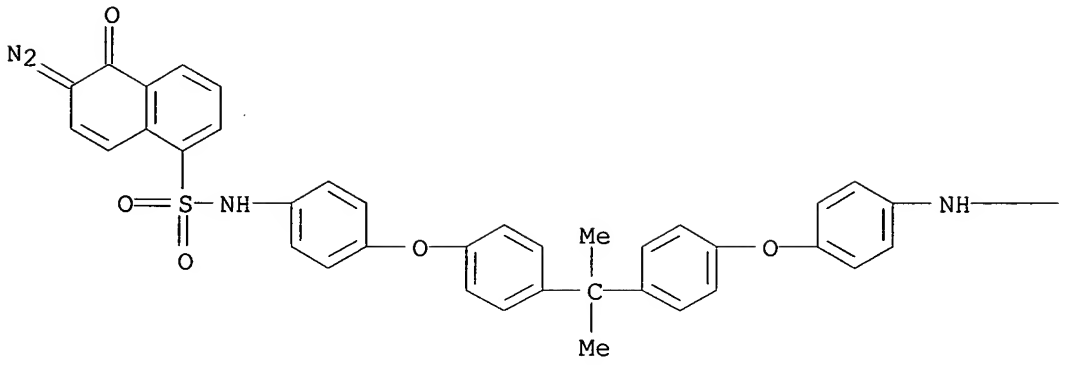
IT **23034-56-2 38412-12-3**
RL: USES (Uses)
(**photoresist compns**. containing hydroxyphenyl **siloxanes** and)

RN 23034-56-2 HCAPLUS
CN 1-Naphthalenesulfonamide, 6-diazo-N-(9-ethyl-9H-carbazol-3-yl)-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

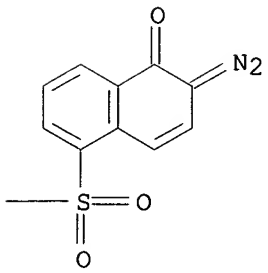


RN 38412-12-3 HCAPLUS
CN 1-Naphthalenesulfonamide, N,N'-[(1-methylethylidene)bis(4,1-phenyleneoxy-4,1-phenylene)]bis[6-diazo-5,6-dihydro-5-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L45 ANSWER 37 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1986:216443 HCAPLUS
DN 104:216443
TI Toner for development of latent electrostatic images
PA Konishiroku Photo Industry Co., Ltd. , Japan
SO Ger. Offen., 35 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3518414	A1	19860102	DE 1985-3518414	19850522
	JP 60247247	A2	19851206	JP 1984-101815	19840522
	JP 60247249	A2	19851206	JP 1984-101817	19840522
	JP 60247250	A2	19851206	JP 1984-101818	19840522
	US 4693952	A	19870915	US 1985-736705	19850522
PRAI	JP 1984-101815	A	19840522		
	JP 1984-101817	A	19840522		
	JP 1984-101818	A	19840522		

AB A toner for the development of electrostatic images, that does not require special requirements for fixing, is composed of a polyester resin obtained by polymerization of a **composition** containing an alc. monomer and a carboxylic acid monomer, wherein ≥1 of the components is at least trivalent, and an epoxy resin. The resultant toner image has outstanding durability and is unaffected when stored in contact with a resin film. Thus, a **composition** containing a pentaerythritol-polyoxypropylene(2,2)-2,2-bis(4-

hydroxyphenyl)propane-terephthalic acid copolymer 40, Epikote 1004F (epoxy resin; softening point 97°) 60, C black (Mogal L) 5 parts was melt-kneaded, cooled, pulverized, and classified to give a toner (particle size of 12-13 μm). The resultant toner 1.5 and a carrier 58.5 g were mixed and the toner charge and softening point were determined to be +22.2 and 114.5°, resp. When this developer was used to produce copies, excellent copies showing to fog or offsetting were obtained.

IC ICM G03G009-08

CC 74-3 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

IT **Siloxanes** and **Silicones**, uses and miscellaneous
RL: USES (Uses)
(di-Me, electrophotog. toner containing epoxy resin and polyester resin and, with improved image durability)

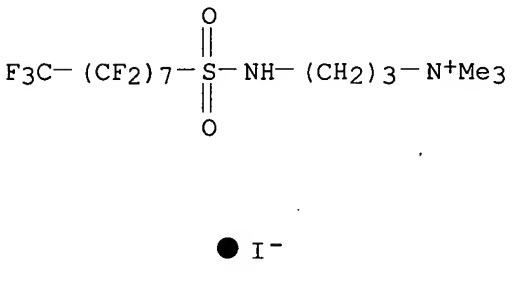
IT **Photography**, electro-, developers
(toners, containing epoxy resin and polyester resin for improved image durability)

IT 75-35-4D, polymers 110-30-5 557-05-1 **1652-63-7** 8005-02-5 9010-79-1 74566-13-5 84179-66-8 90597-68-5
RL: USES (Uses)
(electrophotog. toner containing epoxy resin and polyester resin and, with improved **image** durability)

IT **1652-63-7**
RL: USES (Uses)
(electrophotog. toner containing epoxy resin and polyester resin and, with improved **image** durability)

RN 1652-63-7 HCAPLUS

CN 1-Propanaminium, 3-[[(heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-, iodide (9CI) (CA INDEX NAME)



L45 ANSWER 38 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1985:36818 HCAPLUS

DN 102:36818

TI Carbamoyloxy-substituted couplers in a **photothermographic** element

IN Adin, Anthony; Kovacs, Csaba A.; Machiele, Delwyn E.

PA Eastman Kodak Co., USA

SO U.S., 22 pp.
CODEN: USXXAM

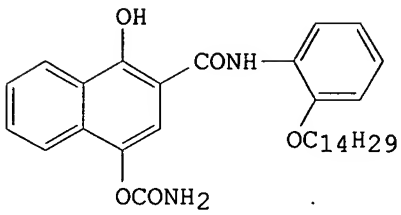
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4469773	A	19840904	US 1983-504754	19830615
	JP 60012548	A2	19850122	JP 1984-123534	19840615

PRAI US 1983-504754 A 19830615
GI



I

AB A **photothermog.** element is described producing a Ag image and a dye image the latter in response to NH3 or an amine presence. The material contains a **photog.** Ag halide, a Ag halide developing agent and a dye coupler containing carbamoyloxy group. The coupler reaction with oxidized developer releases a carbamic acid fragment that in turn is capable of thermally releasing NH3 or an amine. Thus, a subbed poly(ethylene terephthalate) support was coated with a **composition** containing I 0.033, N-(tert-butyl)-N'-(4-ethylaminophenyl)urea 0.015, 2-methoxyethanol 0.1, THF 0.2, phthalazinone (2 mg in 0.2 g THF) 0.2, mercuric chloride (in 1 drop of THF) 0.00125, Pluronic L-121 (6 mg in 0.2 mg PhMe) 0.2, Butvar B-76 (10 weight% in PhMe) 0.2, Ag behenate dispersion (containing Me2CO 406.9, PhMe 438.3, Butvar B-76 55, alumina 8.8, behenic acid 31.2, Li stearate 5.9, Ag behenate 50 g) 0.6, Ag(Br,I) emulsion (containing Me2CO, Butvar B-76, LiI, LiBr, Ag trifluoroacetate; 15.7% solids; 40 g Ag/L solution) 0.2 g at a wet coating of 50.8 μ, dried, imagewise exposed for 10-3 s and contacted with a receiver element containing a support, NH3 responsive layer consisting of SF-1066 3.7, poly(ethylene-1,4-cyclohexylenedimethylene-1-methyl-2,4-benzenedisulfonamide) 75.6, phthalaldehyde 25.1, Co(III) hexaammine trifluoroacetate 12.5 mg/cm2 and an overcoat layer consisting of Co(III) hexaammine trifluoroacetate 3.2, poly(acrylamide-N-vinyl-2-pyrrolidone-2-acetoxyethyl methacrylate 21.6 mg/dm2. The elements were laminated and heated at .apprx.121°. The sandwich was then heated at 120° for 7 s and peeled apart, revealing a cyan image in the Ag(Br,I) layer. The layer of the element containing NH3 responsive layer contained a high contrast neutral (black) image having a neutral diffuse Dmax 2.95 and Dmin 0.04.

IC G03C001-02
NCL 430222000
CC 74-7 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST **photothermog** carbamoyloxy substituted dye coupler
IT **Photothermography**
(carbamoyloxy-substituted couplers for)
IT **Siloxanes** and **Silicones**, uses and miscellaneous
RL: USES (Uses)
(di-Me hydroxy-terminated ethoxylated-propoxylated **photothermog**. image receiving element containing, carbamoyloxy-substituted couplers for, formation of silver and dye images in)
IT 88374-96-3 92974-45-3 92989-58-7
RL: USES (Uses)
(**photothermog.** element producing silver and dye images containing)
IT 112-85-6 119-39-1 2489-05-6 2966-50-9 7487-94-7, uses and miscellaneous 9003-11-6 88374-95-2

RL: USES (Uses)
(**photothermog.** element producing silver and dye images containing, carbamoyloxy-substituted couplers for)

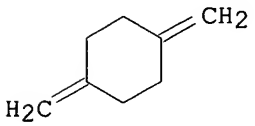
IT 59561-55-6 **92934-24-2** 92974-47-5
RL: USES (Uses)
(**photothermog. image** receiving element containing, carbamoyloxy-substituted couplers for, formation of silver and dye **images** in)

IT **92934-24-2**
RL: USES (Uses)
(**photothermog. image** receiving element containing, carbamoyloxy-substituted couplers for, formation of silver and dye **images** in)

RN 92934-24-2 HCAPLUS
CN 1,3-Benzenedisulfonamide, 4-methyl-, polymer with 1,4-bis(methylene)cyclohexane and ethene (9CI) (CA INDEX NAME)

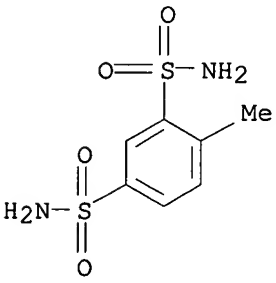
CM 1

CRN 4982-20-1
CMF C8 H12



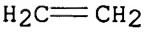
CM 2

CRN 717-44-2
CMF C7 H10 N2 O4 S2



CM 3

CRN 74-85-1
CMF C2 H4



L45 ANSWER 39 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:480064 HCAPLUS
DN 99:80064
TI **Photopolymerizable** recording **composition** suitable for producing **photoresist** layers
IN Barzynski, Helmut; Eckell, Albrecht; Elzer, Albert; Klinsmann, Uwe; Leyrer, Reinhold J.; Sanner, Axel
PA BASF A.-G. , Fed. Rep. Ger.
SO Eur. Pat. Appl., 36 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 71789	A1	19830216	EP 1982-106331	19820715
	EP 71789	B1	19860604		
	EP 71789	B2	19900808		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	DE 3131448	A1	19830224	DE 1981-3131448	19810807
	AT 20286	E	19860615	AT 1982-106331	19820715
	JP 58030748	A2	19830223	JP 1982-135291	19820804
	US 4632897	A	19861230	US 1983-565929	19831227
PRAI	DE 1981-3131448	A	19810807		
	EP 1982-106331	A	19820715		
	US 1982-406436	A1	19820809		

AB **Photoresist compns.** having excellent adhesion to metal supports are composed of ≥1 **photopolymerizable**, ethylenically unsatd., low-mol. weight compound, ≥1 **photoinitiator**, the usual additives and/or aids (optional), and ≥1 binder from a vinyl polymer containing incorporated amino and/or imino groups. Thus, a solution containing a 2-dimethylaminoethyl methacrylate-Me methacrylate copolymer (3:97%; mol. weight 180,000) 53, trimethylolpropane triacrylate 33.8, 4,4'-bis(dimethylamino)benzophenone 0.28, benzophenone 3.0, N-nitrosodiphenylamine 0.012, crystal violet 0.008, crystal violet leuco base 0.6, **silicone** oil 0.1, 2,5-dichloro-1,4-bis(dichloromethyl)benzene 2.0, p-toluenesulfonamide 7.2 parts, and sufficient EtOAc to give 27% solids. After filtering, the solution was coated on a temporary polyester support, dried to give a 48 μ thick layer, and then a low-pressure polyethylene film added thereto give a dry film resist material. This polyethylene film on this material was then stripped off and the material laminated to a Cu-laminated plate at 110° and 1 m/min. The adhesion between the **photoresist** layer and the temporary polyester support was 156 p/2 cm and the adhesion between the **photoresist** layer and the Cu surface was 784 p/2 cm.

IC G03C001-70; G03C001-76; G03C001-90; G03F007-26; G03F007-10; C08L033-14; C08L033-24; C08F008-32; C08F220-34; C08F220-60
ICA H05K003-06
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST vinyl polymer binder **photoresist** adhesion; acrylic polymer binder **photoresist** adhesion
IT Acrylic polymers, uses and miscellaneous
RL: USES (Uses)
(amino or imino group-containing, **photoresist compns.** containing binders of, for improved adhesion)
IT **Photochromic** substances

Siloxanes and **Silicones**, uses and miscellaneous
RL: USES (Uses)
(**photoresist compns**. containing vinyl polymer binder and, for improved adhesion)

IT Vinyl compounds, polymers
RL: USES (Uses)
(polymers, amino or imino group-containing, **photoresist compns**. containing binders of, with improved adhesion)

IT Resists
(**photo-**, with binders from vinyl polymers containing amino or imino groups for improved adhesion)

IT 79-10-7D, esters, polymers 79-41-4D, esters, polymers
RL: USES (Uses)
(**photoresist compns**. containing binders of, for improved adhesion)

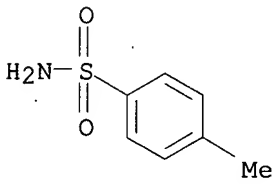
IT **70-55-3** 86-30-6 90-94-8 109-17-1 119-61-9, uses and miscellaneous 467-63-0 548-62-9 2478-10-6D, reaction products with polyoxybutylene and toluene diisocyanate 15625-89-5 25322-25-2 26471-62-5D, reaction products with butanediol monoacrylate and polyoxybutylene 41999-84-2 51160-98-6D, reaction products with butanediol monoacrylate and toluene diisocyanate
RL: USES (Uses)
(**photoresist compns**. containing vinyl polymer binder and, for improved adhesion)

IT 82901-45-9 86710-45-4
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist compns**. containing, for improved adhesion)

IT 26222-42-4
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoresist compns**. containing, with improved adhesion)

IT **70-55-3**
RL: USES (Uses)
(**photoresist compns**. containing vinyl polymer binder and, for improved adhesion)

RN 70-55-3 HCAPLUS
CN Benzenesulfonamide, 4-methyl- (9CI) (CA INDEX NAME)



L45 ANSWER 40 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1982:172238 HCAPLUS
DN 96:172238
TI Image transfer element having release layer
IN Steelman, Ronald S.; Larkins, Rodney J.
PA Minnesota Mining and Manufacturing Co., USA
SO U.S., 7 pp. Cont. of U.S. Ser. No. 680,666, abandoned.
CODEN: USXXAM
DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4310615	A	19820112	US 1980-186147	19800910
PRAI	US 1976-680666	A1	19760427		

AB A light-sensitive dry transfer element which upon single imagewise exposure and development provides pressure transferable indicia having excellent resolution is described. The element consists of a transparent support with a release coating and a **photosensitive** layer containing an addition polymerizable non-gaseous ethylenically-unsatd. compound, a **photoinitiator**, a pressure-sensitive adhesive and a binder. Thus, a transparent 3 mil polyester support was coated with a release layer containing Methocel 7.5, PrOH 22.5, H2O 120, Nalcoag 1050 20, Triton X-100 1 g, dried at 180°F for 3 min to give a dry coating weight of 0.6 g/ft2, overcoated with a **photosensitive composition** containing Gelva C5V16 8.7, Cabot Sterling R 1.62, EtOH 9.8, MeCOEt 17.4, pentaerythritol tetraacrylate 3.5, tris-2-hydroxyethylisocyanourate triacrylate 11.9, Daratak 74L 12.9, Pycal 94 1.9, FC-430 0.24, Polyox N-10 1.4, 2-(p-methoxystyryl)-4,6-bis(trichloromethyl)-s-triazine 0.42, MeCOEt 31 g, dried at 180°F for 4 min to give a dry coat weight of 2.5 g/ft2, coated with a top layer containing Gelvatol 20-30 7, H2O 70, MeOH 23 g, dried at 180°F for 2 min to give a dry coat weight of 150 mg/ft2, imagewise exposed 2 min in a NuArc pulsed Xe exposure unit, developed with aqueous 1% sodium silicate, rinsed with H2O, and dried. The image transfer was accomplished by contacting the obtained element with a receptor paper and rubbing the polyester support with a dull pencil, and then peeling the support away.

IC G03C001-68; G03C001-78

NCL 430271000

CC 74-13 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST light sensitive dry transfer image; indicia transfer **photosensitive** layer

IT Carbon black, uses and miscellaneous
RL: USES (Uses)
(**photosensitive composition** for dry image-transfer element containing)

IT **Siloxanes** and **Silicones**, uses and miscellaneous
RL: USES (Uses)
(**photosensitive** dry image-transfer element with release layer containing)

IT Vinyl acetal polymers
RL: USES (Uses)
(butyrals, **photosensitive composition** for dry image-transfer element containing)

IT Rubber, synthetic
(polysulfide, **photosensitive composition** for dry image-transfer element containing)

IT 131-56-6 2395-97-3 3290-92-4 4986-89-4 **8047-99-2** 9004-36-8 9041-09-2 11114-17-3 25609-89-6 26781-49-7 40220-08-4 42573-57-9 53124-92-8 62046-54-2 62046-59-7
RL: USES (Uses)
(**photosensitive composition** for dry **image**-transfer element containing)

IT 9002-89-5 9004-62-0
RL: USES (Uses)
(**photosensitive** dry image-transfer element containing top layer of)

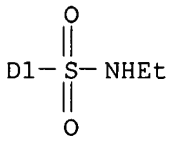
IT 7631-86-9, uses and miscellaneous 9002-93-1 9004-67-5 25322-68-3

60476-58-6 62046-62-2 81544-24-3
RL: USES (Uses)
(**photosensitive** dry image-transfer element with release layer containing)

IT **8047-99-2**
RL: USES (Uses)
(**photosensitive composition** for dry **image** -transfer element containing)

RN 8047-99-2 HCAPLUS
CN Benzenesulfonamide, N-ethyl-2(or 4)-methyl- (9CI) (CA INDEX NAME)

D1—Me



D1—S(=O)(=O)—NHEt

L45 ANSWER 41 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:620239 HCAPLUS
DN 91:220239
TI Inhibition of image formation utilizing cobalt(III) complexes
AU Adin, A.; Fletcher, G. L.; Yacobucci, P.; Fleming, J. C.; Prezezdziecki, W.; Sutton, R. C.; Wilson, J. C.; VanHanehem, R.; Verdone, J.
CS UK
SO Research Disclosure (1979), 184, 446-54 (No. 18436)
CODEN: RSDSBB; ISSN: 0374-4353
DT Journal; Patent
LA English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI RD 184036		19790810		
PRAI RD 1979-184036		19790810		

AB Pos.- or neg.-working **photoimaging compns.** are described containing an image precursor **composition** comprising ≥1 Co(III) complex containing releasable ligands and a **photoinhibitor,** such as a **photolytic** acid generator, which inhibits after a suitable exposure the release of ligands which would otherwise occur by the exposure of the image precursor compound Thus, to a solution prepared by dissolving CH3I 120 and 2-dibenzylamino-3-chloro-1,4-naphthoquinone 25 mg in dioxane 1 g was added a solution containing Co(NH3)6(CF3CO2)3 120 and phthalaldehyde 166 mg in 20% E2CO-H2O (95:5) solution of poly(ethylene-1,4-cyclohexylenedimethylene-1-methyl-2,4-benzenesulfonamide). This dope was then coated on a poly(ethylene terephthalate) support and overcoated with a 10% solution of a Biphenol A-1,1,3-trimethyl-5k-carboxy-3-(p-carboxyphenyl)indan polyester in PhMe. The finished material was then exposed for 0.5 s on an IBM Microcopier IID device through a Ag master and

a Wralten 2A filter. Upon heating for 15 s face-up on a 140° hot block, a black neg. image was formed. The same material was exposed for 6 s through a Ag master and Wratten 34 filter and then followed by a 0.5 s dye-development exposure through a Wratten 2A filter and 15 s of heating face-up on a 140° hot block to give a pos. image.

CC 74-8 (Radiation Chemistry, Photochemistry, and **Photographic** Processes)

ST **photoimaging** cobalt complex **photoinhibitor**; pos **photoimaging** cobalt complex; neg **photoimaging** cobalt complex

IT Acrylic polymers, uses and miscellaneous
Polyamides, uses and miscellaneous
Vinyl compounds, polymers
RL: USES (Uses)
(for **photoimaging compns.** containing cobalt(III) complex and inhibitor **composition**)

IT **Siloxanes** and **Silicones**, uses and miscellaneous
RL: USES (Uses)
(**photoimaging compns.** containing hexaamminecobalt(III) trifluoroacetate and, pos.- or neg.-working)

IT **Photoimaging compositions** and processes
(neg.-working, pos.- or, containing cobalt(III) complexes image precursor **composition** and **photoinhibitor composition**)

IT 84-85-5 88-97-1 92-05-7 2654-58-2 2947-23-1 25067-61-2
35429-23-3 59641-22-4 **62814-34-0** 62814-40-8 62814-49-7
67099-23-4 67746-66-1 71938-36-8 71938-38-0 71938-40-4
71938-42-6 72077-03-3
RL: USES (Uses)
(**photoimaging compns.** containing cobalt complex, **photoinhibitor**, and, pos.- or neg.-working)

IT 75-47-8 120-40-1 643-79-8 3584-23-4 42573-57-9
RL: USES (Uses)
(**photoimaging compns.** containing hexaamminecobalt(III) trifluoroacetate and, pos.- or neg.-working)

IT 59561-55-6
RL: USES (Uses)
(**photoimaging compns.** containing **photoinhibitor composition** and, pos.- or neg.-working)

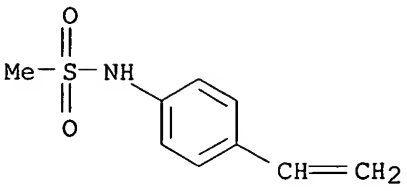
IT **62814-34-0**
RL: USES (Uses)
(**photoimaging compns.** containing cobalt complex, **photoinhibitor**, and, pos.- or neg.-working)

RN 62814-34-0 HCAPLUS

CN Methanesulfonamide, N-(4-ethenylphenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 62814-33-9
CMF C9 H11 N O2 S



L45 ANSWER 42 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1974:126807 HCAPLUS
DN 80:126807
TI **Photoresist compositions** containing diazoquinone **siloxanes**
IN Lazarus, Sam; Turner, Edwin John
PA Phillip A. Hunt Chemical Corp.
SO Ger. Offen., 19 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2312499	A1	19731206	DE 1973-2312499	19730313
	FR 2185631	A1	19740104	FR 1972-42975	19721129
	GB 1367830	A	19740925	GB 1972-56663	19721208
	BE 793490	A1	19730629	BE 1972-125964	19721229
PRAI	US 1972-256097	A	19720523		

AB **Photoresist compns.** with increased adhesion to SiO2 surfaces in aqueous etching solns. are obtained by adding to a light-sensitive phenolic resin **composition** a compound RXCH2Si(OR1)3 (I; R = aromatic diazoquinone, R1 = lower alkyl; and X = SO2NH). Examples of I are 1-[2-diazo-1-naphthol-5(6)-sulfonamido]-3-(triethoxysilyl)-propane, 1-[2-diazo-1-naphthol-5(6)-sulfonamido]-2-(trimethoxysilylpropyl)ethane and 1-[methylpropionyl-1-2(2-diazo-1-naphthol-5(6)-sulfonamido]-3-(trimethoxysilyl)propane.
IC C07F; G03F
CC 74-6 (Radiation Chemistry, Photochemistry, and **Photographic** Processes)
ST diazoquinone **siloxane** adhesive **photoresist**; silica **photoresist** etch resistant
IT Resists
(**photo-**, **siloxane** adhesion promoters for, on silica)
IT Phenolic resins
RL: USES (Uses)
(reaction products, with (diazonaphtholsulfonamido)(triethoxysilyl)propane, **photoresists** containing)
IT **Siloxanes** and **Silicones**, compounds
RL: USES (Uses)
(reaction products, with phenolic resins, **photoresist** adhesion improvement by)
IT Phenol, polymer with formaldehyde and nonylphenol, reaction products with diazonaphtholsulfonyl chloride
RL: USES (Uses)
(**photoresists** containing, improved adhesion to silica by)
IT 7631-86-9, properties

RL: PRP (Properties)
(adhesion of, to **photoresists, siloxane** improvement of)

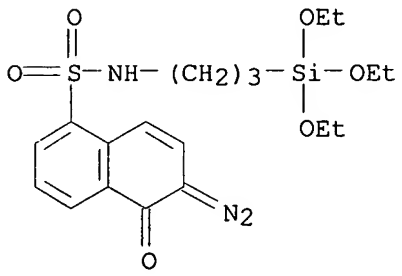
IT **52505-87-0**
RL: USES (Uses)
(**photoresists composition** containing, improved adhesion to silica by)

IT 9003-35-4 25086-15-1 52749-39-0
RL: USES (Uses)
(**photoresists** containing diazoquinone **siloxanes** and, for silica surfaces)

IT 3770-97-6D, 1-Naphthalenesulfonyl chloride, 6-diazo-5,6-dihydro-5-oxo-, reaction products with nonylphenol-phenol-formaldehyde polymers 37238-34-9D, Phenol, nonyl-, polymer with formaldehyde and phenol, reaction products with diazonaphtholsulfonyl chloride
RL: USES (Uses)
(**photoresists** containing, improved adhesion to silica by)

IT **52505-87-0**
RL: USES (Uses)
(**photoresists composition** containing, improved adhesion to silica by)

RN 52505-87-0 HCAPLUS
CN 1-Naphthalenesulfonamide, 6-diazo-5,6-dihydro-5-oxo-N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



L45 ANSWER 43 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1973:36314 HCAPLUS
DN 78:36314
TI Light-sensitive material for use in the preparation of dry-transfer sheets
IN Beeber, Allan R. A.
PA Ozalid Co. Ltd.
SO Brit., 7 pp.
CODEN: BRXXAA
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 1291960		19721004	GB 1971-850	19710107

AB A film assembly that is 1st imaged and then transferred in the dry state to a permanent receptor sheet, followed by the removal of the temporary support of the assembly, is comprised of a temporary strippable support which is coated with a **silicone** release agent, a pigmented layer containing pressure-rupturable adhesive encapsulated capsules, and a light sensitive layer. Thus, a translucent support was 1st coated with a

pigmented coating **composition** containing gelatin 1.4, H2O 8.6, methylene blue 0.5, and microcapsules of adhesive 5.0 g and then with a light-sensitive **composition** containing 1,2-benzoquinone-2-diazo-4-(N,N-diphenyl)sulfonamide 0.4 g, alkali-soluble phenol-HCHO novolak resin 0.2 g, and glycol monomethyl ether 20 ml. Upon exposure to light under a pos. master, the exposed portions of the 2 coatings were removed by washing with 3% by weight aqueous solution of Na3PO4, leaving the imaged dry-transferable sheet. After transfer, accomplished by pressure-contacting the light sensitive layer with a receptor sheet which causes the microcapsule to rupture and permits the adhesive to diffuse to the surface of the light sensitive layer, the temporary translucent support is stripped away to give the finished product.

IC G03C

CC 74-3 (Radiation Chemistry, Photochemistry, and **Photographic** Processes)

IT **Photoduplication**
(light-sensitive sheets containing encapsulated adhesives for, for transferable images)

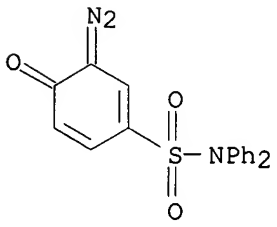
IT 9003-44-5
RL: USES (Uses)
(adhesives from alkyd resins and, for light-sensitive **photog.** image transfer sheets)

IT **39933-34-1**
RL: USES (Uses)
(light-sensitive **compns.** containing, for **photog.** **image** transfer sheets)

IT **39933-34-1**
RL: USES (Uses)
(light-sensitive **compns.** containing, for **photog.** **image** transfer sheets)

RN 39933-34-1 HCAPLUS

CN 1,5-Cyclohexadiene-1-sulfonamide, 3-diazo-4-oxo-N,N-diphenyl- (7CI, 9CI) (CA INDEX NAME)



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